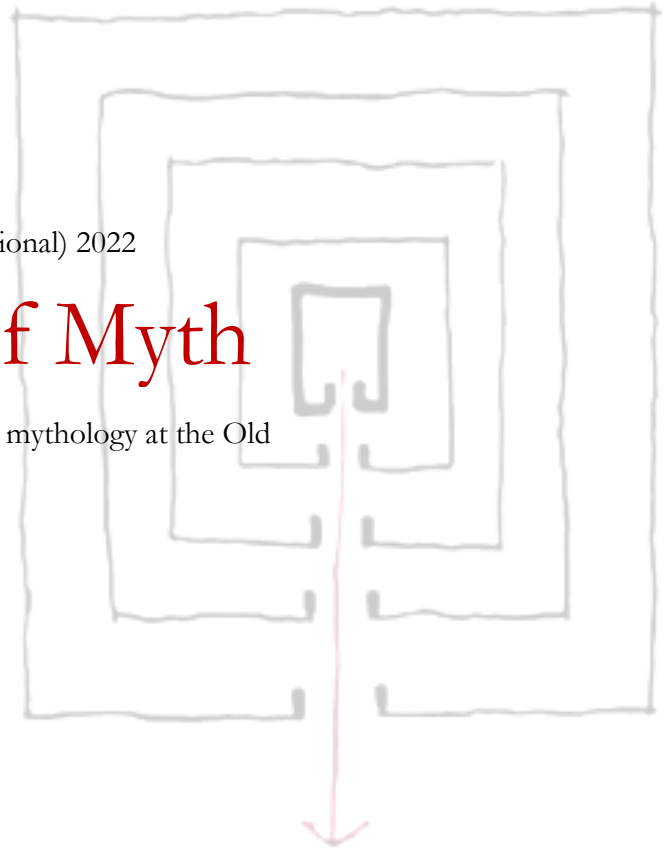


University of Pretoria, M. Arch (Professional) 2022

# The Spaces of Myth

Rethinking the history museum through mythology at the Old  
Staatsmuseum ruin.



Yeshayran Pillay  
15208827

## ABSTRACT

History museums in the 21st century are facing an identity crisis and nearing irrelevance. Their devolution has made history separate from the present, controlled and binary, often resulting in a mono-epistemic narrative of history where the West has prevailed and has thus limited its function as a custodian of history. Museums have slowly decentralised into containers of collections and passive observance, cut off from the public realm. In post-industrial cities, such as Pretoria, a lack of good museum public space scarcely allows for discussion and exposure to ideas. Ocularcentrism has produced an architecture of detachment and isolation. Museum architecture's role is often reduced to a subservient one concerned with pleasing the eye and lacked engagement of all the bodily senses. The intention is to reconcile the modern history museum's limitations with the contingency of history and time. This proposal considers a mythic interpretation of history. Such an approach presents a heterogeneous and inclusive perspective and moves beyond the object into an intangible, ambiguous, and sublime nature of history and heritage.

# THE SPACES OF MYTH

*Rethinking the history museum through mythology at the Old Staatsmuseum ruin.*

## Research field

Memory, Legacy and Identity / Inhabitation of Place

## Study Leader

Silindzile Shongwe

## Site

The Old Staatsmuseum on Boom St, Pretoria  
[25°44'19.3"S 28°11'23.4"E]

## Program

History museum, haptic exhibitions, library,  
artist's workshop

## Intention

Sets out to expand the existing limitations of  
the history museum type, through the  
contingency of time, ruin, and mythology.

## Keywords

history, museums, mythology, ruin,  
hapticity, ocularcentricism

In accordance with Regulation 4(c) of the General Regulations (G.57) for dissertations and theses, I declare that this dissertation, which I hereby submit for the degree Master of Architecture (Professional) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my dissertation has already been, or is currently being, submitted for any such degree, diploma, or other qualification.

I further declare that this dissertation is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.



Yeshayran Pillay

29-08-2022

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*Of whose help made this dissertation possible*

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The late Zen master, Thich Nhat Hanh, whose teachings of wisdom brought solace and peace to my troubled mind in the darkest hour.

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## INVOCATION

*Then was not non-existent nor existent: there was no realm of air, no sky beyond it.  
What covered in, and where? and what gave shelter? Was water there, unfathomed depth of water?  
Death was not then, nor was there aught immortal: no sign was there, the day's and night's divider.  
That One Thing, breathless, breathed by its own nature: apart from it was nothing whatsoever.  
Darkness there was: at first concealed in darkness this. All was indiscriminated chaos.  
All that existed then was void and form less: by the great power of Warmth was born that Unit.  
Thereafter rose Desire in the beginning, Desire, the primal seed and germ of Spirit.  
Sages who searched with their heart's thought discovered the existent's kinship in the non-existent.  
Transversely was their severing line extended: what was above it then, and what below it?  
There were begetters, there were mighty forces, free action here and energy up yonder  
Who verily knows and who can here declare it, whence it was born and whence comes this creation?  
The Gods are later than this world's production. Who knows then whence it first came into being?  
He, the first origin of this creation, whether he formed it all or did not form it,  
Whose eye controls this world in highest heaven, he verily knows it, or perhaps he knows not.*

- Hymn 129, Book 10 in *Rig Veda*, (translated by Ralph T. Griffith from Sanskrit), composed 1500 BCE  
in India, being humanity's first recorded musings on the origins of the cosmos

## **PART 1: POSITION & SITUATION**

## INTRODUCTION

The Enlightenment paradigm of the 19<sup>th</sup> and 20<sup>th</sup> centuries has been so obsessed with perfectionism and progress, that it has created enemies from ambivalence, imperfection and decay and instead regarded this with fear, suspicion, and malice. The fragile, sometimes narcissistic image of humans as the rightful masters of the world, through dominion, rationality, and control over uncertainty, starts to fracture under the pressure of forces beyond our control. The creation of museums can be considered an ideological tool to reinforce such ideas of order and control over time and history (Walsh 1992:38). The International Council of Museums (ICOM) has defined museums as the “non-profit, permanent institution in the service of society” with a focus on collecting, conservation, and communication<sup>1</sup>. This definition has remained fixed since its last amendment in 2007 (Henning 2020). In 2019 at a meeting in Kyoto, ICOM proposed a revision for a new definition: to proclaim museums as spaces for “critical dialogue about the pasts and the futures”, to contribute to “human dignity and social justice, global equality and planetary wellbeing.” (ICOM 2019). This reaction came from a desire for museums to outgrow their scientific and colonial origins as a cabinet of “classified specimens and artefacts”, later propagating ideas of progress and order during the Enlightenment (Walsh 1992:34). These objectives made history separate from the present, decontextualising artefacts, and privileged the authority of the curator or architect. In the architecture of the museum, spaces have been reduced to a homogeneous character in the spirit of the modern (Pallasmaa 2012), where contingency is to be exterminated (Till 2009:37) and the visual image taken precedence over the integration of the senses (Pallasmaa 2000).

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<sup>1</sup> “A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment.”

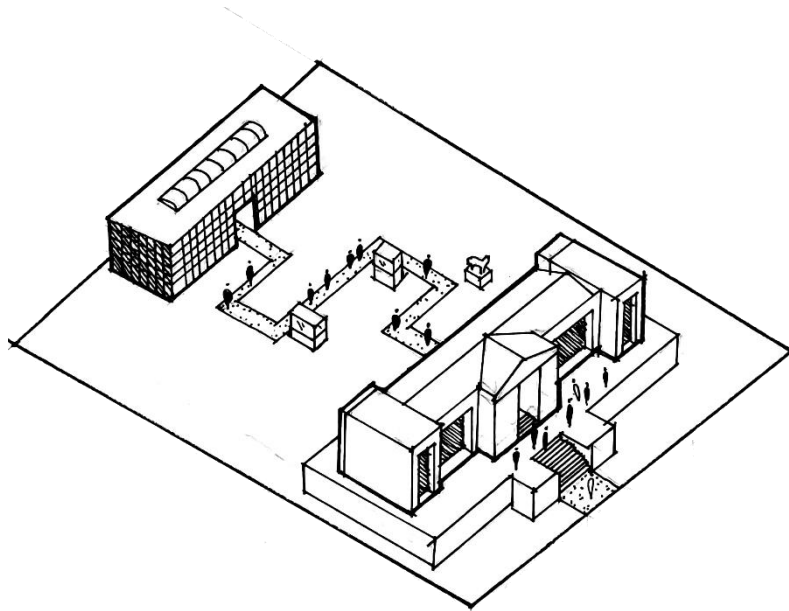


Figure 1. The evolution of a museum from colonised history to present day homogenised visual delights. (Author 2022)

Today, in post-modern South Africa, museums are nearing irrelevance and are quite limited in their representation of history. Although older museums and post-colonial museum design have attempted to mark a shift from collections to an active social role (Henning 2020; Davidson 2000), these attempts have been unsuccessful. This is because South African museums have never evolved out of the Enlightenment idea of museums.

Ambivalence, the other of modernity, is not to be cast out but embraced and accepted. A gentle unravelling of this order relieves some of the pressure of the modern project (Till 2009:57), and into a gentle invitation to solidarity and inclusion (Bauman 1991:257). Museums still matter to us. They allow us to examine our humanity and express our understanding of the world, communicated through public discourse (Janes 2009:18).

## 1. SITUATION

### GENERAL ISSUE: MUSEUMS AND THEIR LIMITS

#### Origins

To begin with, the museum's etymology derives from Ancient Greek (*mouseion*) as the "seat of the Muses", the nine goddesses of culture, art, and history. Further probation leads from a Proto-Indo-European root: "to think" (*mens*) (Online Etymology Dictionary)<sup>2</sup>. For the ancient Classics, a museum meant a place of learning and exchange of knowledge. Aristotle once had a *mouseion* in his Lyceum for biological specimens from travels. A larger complex was built in Alexandria (c.280 BC) which included the famed library. It was not until the Renaissance in the 14th century that the museum took on its modern-day form. Private scholars began collecting specimens and artefacts from their travels. These collections were arranged (in a hodgepodge manner) in drawers, cabinets, and furnishings in the scholars' homes. Some began to open for

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<sup>2</sup> <https://www.etymonline.com/word/museum>

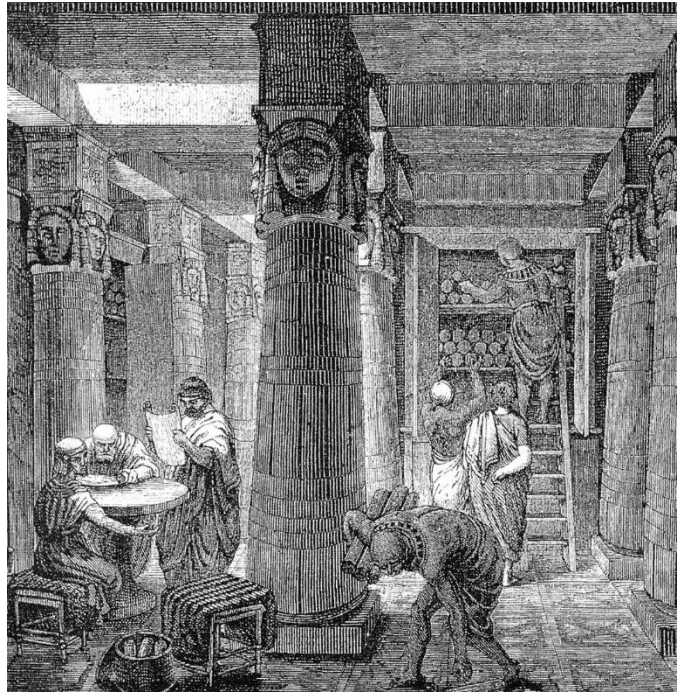


Figure 2. Artistic rendering of the Mouseion of Alexandria  
(commons.wikimedia.org)

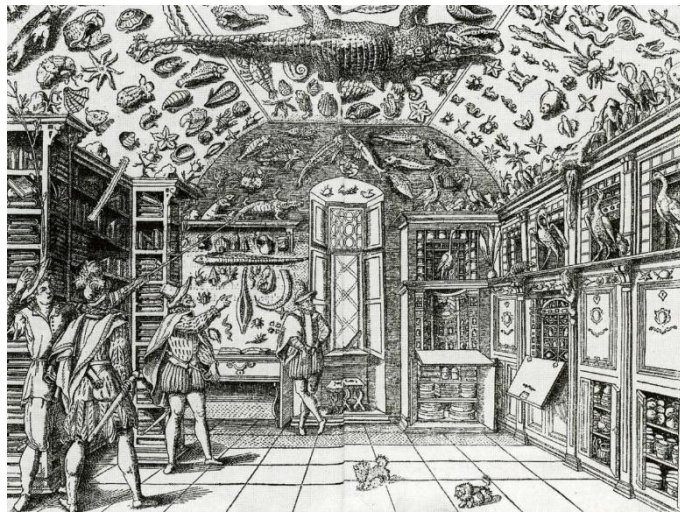


Figure 3. Woodcut of visitors being shown around a “curiosity cabinet” owned by Ferrante Imperato.  
(wikipedia.org/wiki/File:RitrattoMuseoFerranteImperato.jpg)

private viewing sessions, hence the origin of, “cabinet of curiosities”. Yet, these collections ballooned and transferred to universities, or the state, such as the Ashmolean Museum in 1677, the British Museum (1735) and the Louvre (1793) (Abt 2006:116-126; Walsh 1992:18). The arrival of the Enlightenment in the 18th century brought scientific rationalization to the fore, and the Linnaean taxonomy classified the natural world, to which museum curations and exhibits followed suit. Together with the rising of empires and coloniality, these ideas changed our relationship with history, such that their influence is still prevalent today.

### **History, modernity & ambivalence**

The advances in science and rationality brought a close to the medieval mythical and mystical frameworks that grounded human existence, encapsulated by Nietzsche’s criticism of the Enlightenment of “killing God”. Binding these twin ideals together was the zeitgeist of *progress* (Walsh 1992:8). Progress was realised as a vindication of humankind’s domination and position in the natural world and grand narrative of history, thereby giving Western nations the justification for colonising “lesser developed” nations. The notion of progress gave rise to a new ordering in the representation of the past, influenced by the Judeo-Christian concept of linear time (Walsh 1992:10) (as opposed to cyclical models in the East for example). This became more distressing during the Industrial Revolution and the rise of capitalism when time was converted into a structured commodity. Modernity brought a close to a contingent past. The sociologist Zygmunt Bauman states that this society emerged out of the realisation that the human condition was ambiguous, indeterminate, and vulnerable to change or *flux* (Bauman in Till 2009:34). Transparency and certainty were favoured over obscurity and ambivalence. the very act of “classifying” was to give structure or order, and manipulation of probabilities (Bauman 1991:1-5). This greatly influenced the modern museum’s development. It evolved into a means of presenting the past in static and objectified displays, frozen in time and decontextualised.

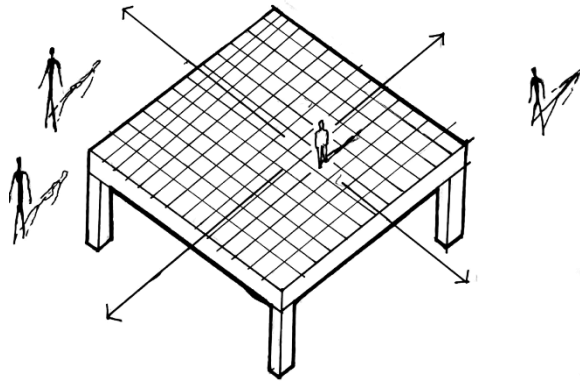


Figure 4. Ordered modernity made enemies from uncertainty and ambiguity. (Author 2022)



Figure 5. The British Museum, Egyptian collection in 1875. The presentation of the past in static and objectified displays. (Frederick York 1875)

It followed that the world, and its people, could be controlled, and classified and unpredictability could be eliminated. The Enlightenment era also saw the emergence and rising authority of specialists or “expert communities”. Such communities deny the public access to any form of “universal knowledge”, even despite the early age of the Internet and increased access to information. The ability of the professional is one based on an imaginary contract between the layperson and the expert. He is beyond the realm of critique and demands trust, authority, and respect (Walsh 1992:27). This distancing also ensured the museum visitor was under the authorship of the curator, author, or architect.

### **The progressive South African museum**

The prevailing conversation for museums in post-apartheid South Africa is revolving around a shift to “people-orientated” museum sites (Dlamuka and Ndlovu 2002; Davidson 2000). This is in concord with the global push for museums to focus on social interaction and not collections. This forms part of the idea that museums can have positive and active roles in communities and the future of humanity, as a “cultural site” and is further articulated in the 2019 ICOM proposed “redefinition” of museums (Henning 2020). For South African heritage and history, this progressive notion fits in current discourses of decolonisation, and past injustice reconciliation. Despite these lofty goals, post-1994 museums have been unsuccessful in achieving them. The Apartheid Museum in Johannesburg has been criticised for being too superficial in delineating its narrative of apartheid tyranny (Findley 2011), whilst the Red Location Museum in Port Elizabeth, although introducing non-linear and intangible styles of museum design to address the rigidity of museum typology, has closed its doors in 2013 after a series of protests in the local community of New Brighton (news24 2014). This could serve as an example of the limited nature of museums as discussed above. Although community involvement is necessary for museums, the deeper issues of contingency and permanence must be enquired about first to extend its longevity and relevance.

## **URBAN ISSUE: DISJUNCTION**

### **Urbanisation**

The rapid industrialisation of the world led to mass migration into cities, particularly in the West during the 18th century and in post-colonial nations during the mid to late 20th century. Pre-industrial societies were centred on their localities, with market towns and farms. The rise of factory work increased machine efficiency and automobiles, bringing those outside major cities to seek job opportunities and capital (Walsh 1992:22). The impact on post-industrial cities meant a disappearance of genuine public space and the *flâneur*. The automobile demanded a high efficiency on road infrastructure, thereby reducing the earlier “bustling street” to become perilous, filled with traffic bloat and lifeless (Figure 7. The disappearance of the museum as a public space in the evolution of the city. (Author 2022), Figure 6. Illustration by Karl Jilg in 2014 for the Swedish Road Administration, showing the perilous nature of automobile dominated streets in present day ) (Bradburne 1999). This tyrannical efficiency of the city devolved the museum space into an unreachable empty container of “things”, solely defined by its programme. It lacks the “urban interior” granted by a public piazza square, thick with autonomous public discourse and discussion.

### **Museums in urban Pretoria**

At present, Pretoria has the status as the executive seat of power in South Africa. Additionally, it plays host to the highest number of museums in any South African city and curates the most valuable historic collections in the country, such as artefacts from Mapungubwe and the Sterkfontein Caves in Gauteng. During the apartheid era, Pretoria was to be transformed into a "model city", proclaiming to the world its progress and sophistication (Judin 2021). Yet, Pretoria's major museums have made little attempt to bridge the gap between public space and internal exhibitions. Even new museums, such as the Javett-UP Museum, curating the Mapungubwe collection, have little to no exterior public spaces for either leisure or intellectual discussion despite

accommodating students at the campus. It stands to reason the evolution of the museum has not kept up with the evolution of the city.

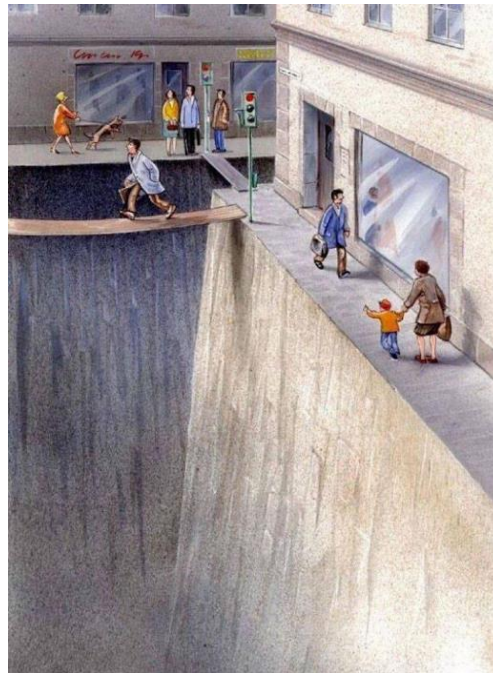


Figure 6. Illustration by Karl Jilg in 2014 for the Swedish Road Administration, showing the perilous nature of automobile dominated streets in present day cities. (Jilg 2014)

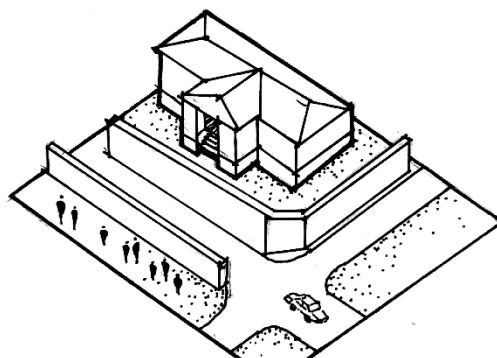


Figure 7. The disappearance of the museum as a public space in the evolution of the city. (Author 2022)



Figure 8 Post-industrial societies, such as most South African cities, designed urban environments with spread out buildings and ill-defined space, usually for the benefit of cars, and property “speculation” (A).

In (B), traditional societies had clearly defined urban public spaces delineated by its buildings, thick with social intercourse.

(Generalistic plan by F. Tibbalds 1992)

## **ARCHITECTURAL ISSUE: OCULARCENTRISM**

### **Objects**

Coloniality introduced the acquisition of artefacts and in rare cases, specimens, from non-European countries, such as Africa, India, and Ancient Egypt, under an almost panoptic gaze. Imposing Euclidean space under Western ideals proved a superior, privileged rationality or worldview, and the acquisition of exotic material legitimized the West as the “inheritor of civilisation” (Fyfe 2006:36). These artefact or taxidermy display enclosures often emphasized the object itself, rather than an understanding of its context or disposition of use. The focus on the visual aesthetic is the primary characteristic. Perception is often constructed because of the expertise of the curator and emplaced in a linear narrative. The presentation format of history takes a homogenous, rather undifferentiated form (Walsh 1992:36-37). The object becomes only an “object”, without meaning, or otherwise, meaning is conferred by the historian or expert.

### **Hegemony of vision**

A tyranny of visual images perpetuates the modern project. Levin (Levin in Pallasmaa 2012:21) maintains that this tendency arose from the same ambivalent, indeterminate nature of the human condition, and a desire for control, certainty, and transparency. The suppression or lack of engagement of the bodily senses produced architectural spaces of detached homogeneity and banal uniformity. Nietzsche, once again, criticised the “eye being outside time and history” (Nietzsche in Pallasmaa 2012:22). The endless production of visual imagery reduces vision into an infinite cacophony of visual hedonism, devoid of emotional investment, participation, or experiential depth (Pallasmaa 2012). Furthermore, architectural space is often aimed at designing a memorable or scenographic image first, as perpetuated by Zaha Hadid Architects’ submission for a natural history museum competition in Chengdu, China or Leo Von Klenze’s panoptic Glyptothek museum, in 1814.



Figure 9. Nok sculpture from Nigeria, Louvre Museum. "Foreign" sculpture is decontextualised and judged according to aesthetics, not contextual meaning (commons.wikimedia.org)



Figure 10. The architecture of scenography and visuals. Though not necessarily Chengdu Natural History Museum competition entry by Zaha Hadid Architects & Gork Studio, 2018. (www.behance.net)

## **SITE: THE OLD STAATSMUSEUM**

This site was the beginning of Pretoria's museum-culture. The Old Staatsmuseum was purpose-built as the first museum for Pretoria within the National Zoological Gardens, established in 1899. This small courtyard building, Dutch in styling, was to curate natural, ethnographic, and cultural history. In 1990, a burst pipe flooded the museum which damaged the building and collections. It has been derelict ever since and remains closed off from the public.

In its present-day context, it lies in a busy intersection off Bloed Street Mall. The presence of more over-scaled buildings, increased traffic and roads has contributed to a loss of meaning as a significant building in its context, as before captured during the mid-century years. There lies a great irony as nature, the very thing that the museum purported to exhibit, has enveloped, and consumed the building. The ruin itself, unoccupied, has an eerily calm, yet mysterious nature, a far cry from the securely clean, atemporal and curated architecture as intended. The Old Museum lies adjacent to a large public space outside the Pretoria Zoo entrance, usually occupied by tourists, school children and traders selling curios. This zone is not accessible from the museum, which is enclosed from the public by a boundary wall. The dominance of hard, dubious, and ill-defined urban edges provides an interesting opportunity for intervention to make this space more people-friendly with mixed-used activities outdoors (Tibbalds 1992).

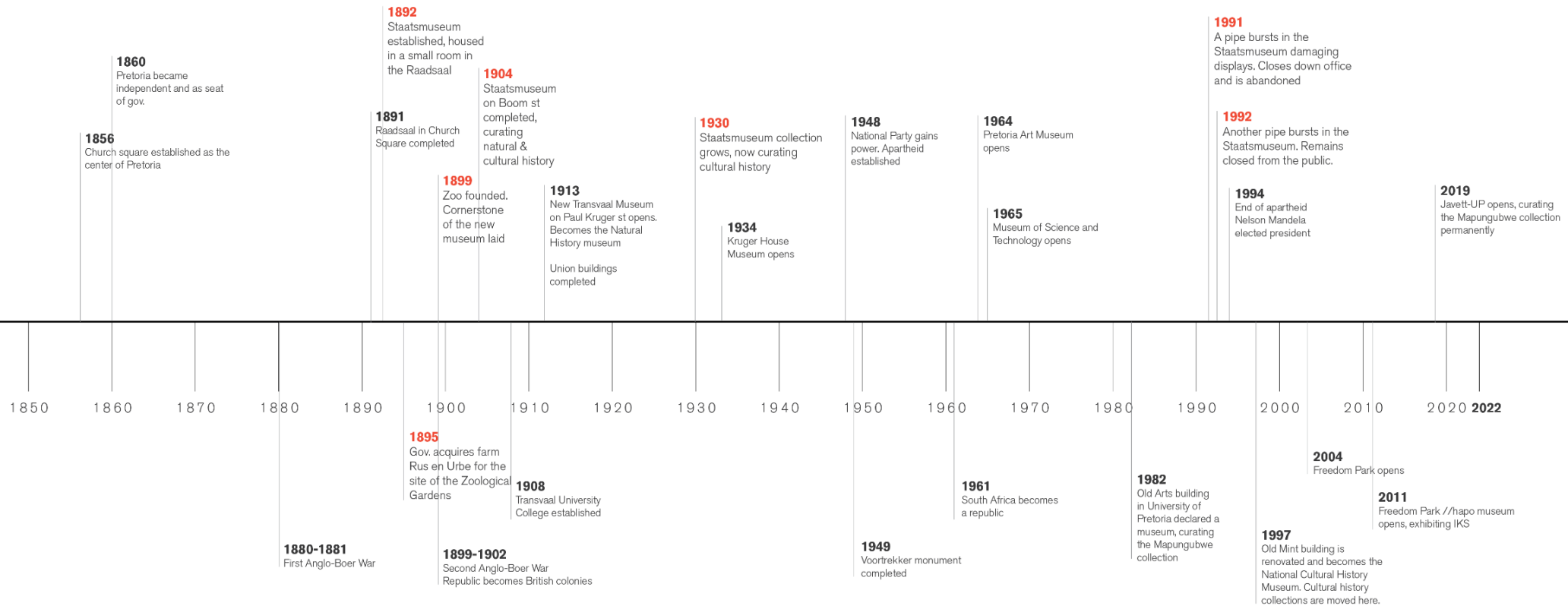


Figure 11. The timeline of development of the Staatsmuseum in Pretoria's history (Author 2022)

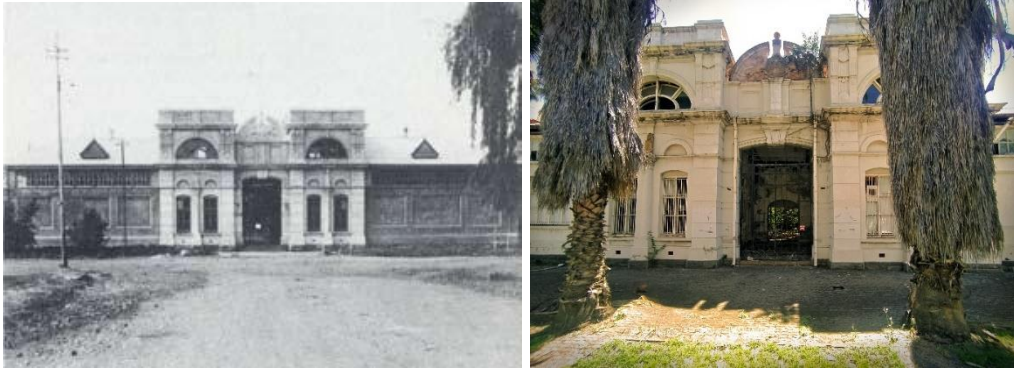


Figure 12. The Staatsmuseum in 1904 (UP Archives) and in 2022 (Author 2022)



Figure 13. Displays in the Staatsmuseum in 1938 and the same room in 2022 (Author 2022)



Figure 14. Pretoria CBD, showing the position of the Old Museum in relation to the ordering of city. The highlighted museums indicate where the Old Museum's collections are located presently (Author 2022)



Figure 15. The entrance to the zoo from Boom St (Google 2022)



Figure 16. The present state of the Old Staatsmuseum. The building has been completely overtaken by an entropic layer of vegetation and ruination. (clockwise top left) the existing courtyard, looking north; courtyard looking south; a corner of the clerestories; inside the main entrance foyer (Author 2022)

## 2. PHILOSOPHICAL READINGS

### ARCHITECTURE'S ARCHETYPES: TEMPLES & RUINS

Archetypes refer to recurring, idealised places that have persisted throughout architectural history, as Simon Unwin (2017) postulates.

- **Temples – museum as a “temple to history”**

Architectural temples assert authority as a reference point in the landscape, often as an idealised form manifesting and projecting itself into the world. Often, they can act as places of psychological refuge, as a church, or at other times, an authoritarian space, as a prison or parliament. They are often frontal, as an act of confrontation and symmetrical across an axis, enhancing its perfect and static nature and suggesting a connection to higher realms. The museum type can be identified as a temple to history, in its rigid, authoritarian curation of history (Unwin 2017:111).

- **Ruins**

Ruin can be considered the antithesis of architecture, or its ambivalence. Its very nature admits there are forces beyond the control of the architect, “a vanquisher of hubris” (Unwin 2017:224). Furthermore, it could be the negation of place entirely. If entropy is the state to which all matter in the universe declines into disorder, then ruin is the fate of all architecture. Because this disruption is so acute from “normal” architecture, it gives a pull of “otherness” to bodily senses. However, ruins can reveal a humbling acceptance of time, imperfection, and the forces of change.

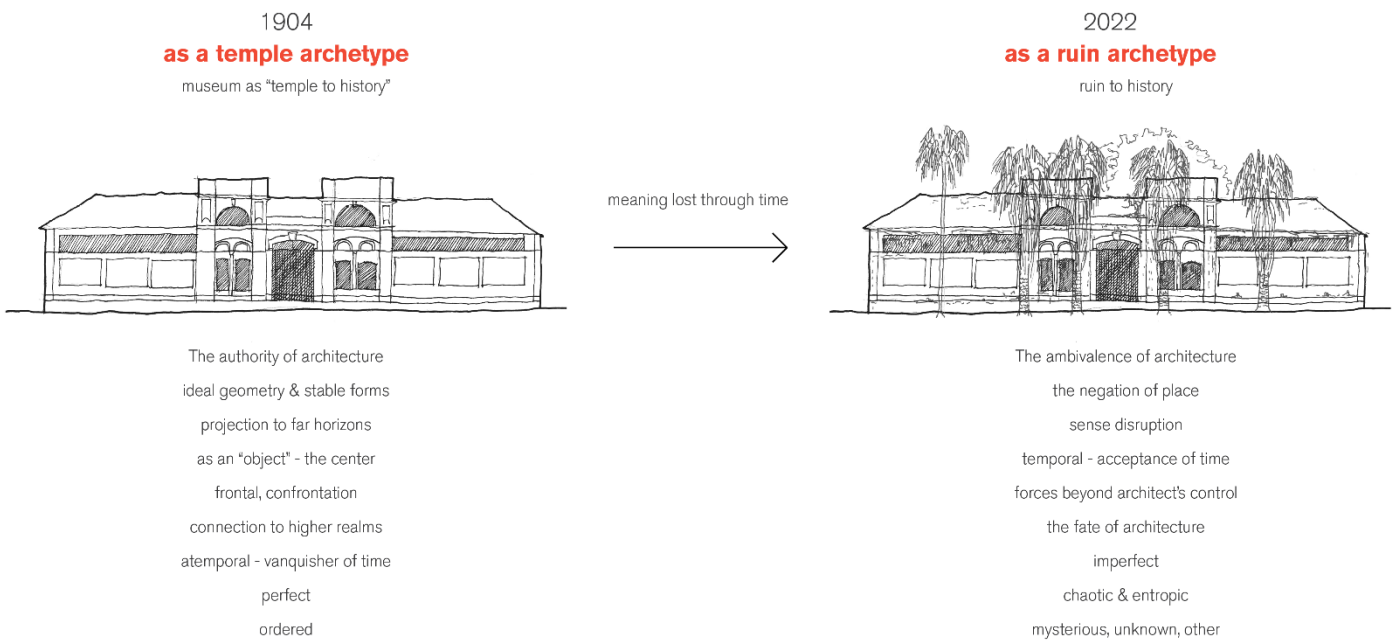


Figure 17. The Staatsmuseum as a "temple" during its golden ages, and as a "ruin" in the present (Author 2022)

## **TIME**

The awareness of time is to be experienced, not the ideological construct. These exist in “temporal surfaces: which could be anything around you. Time brings to place the existence of the other - waste, dirt, decay, weather, ruination, and contributes to the renewal and remaking of nature. To be in time means to collaborate with change, impermanence, and entropy (Till 2009:95-98). The acceptance of impermanence welcomes tolerance to the elemental forces of time and the social changes, and with it, profound complexity.

## **RUINATION & DECAY**

The experience of ruin brings together the experience of uneven, fragmented surfaces, far from the perfected comfort of the new. The ruin stands in opposition to the sanitisation or annihilation of dirt - it presents a deeper sensory encounter with space, and engagement with the body and sense. The preservation of objects for the sake of nostalgia is halted by ruination and decay (Trigg 2010). The presentation of the past as being “neatly ordered and structured” is contested by the ruin, being so fragmented and incomplete. Ruin gives agency to forces beyond our control. We live in an age of anxiety, either clinging to things for nostalgia or expelling dirt and waste into the abject. The comfort or *tolerance* with impermanence lifts the weight of perfection from our shoulders.

## **PERCEPTION: INTEGRATION OF THE SENSES**

Perceiving or experiencing architectural space is gathered from the integration of the entire bodily senses, not only vision. Although the mind creates its meanings and judgements, its starting point of perception begins with the body. The focus on the eye as the primary or exclusive perceiver of space has resulted in designing space that pleases or fits the vision, and not all the senses of the body. A concern for design with the encounter of the body leaves room for a richer, authentic, and more meaningful architecture (Pallasmaa 2000).

## **CONTINGENCY: EVENTS**

Contingent space refers to a state in which things could be otherwise other than how they are currently. A new, completed building is rife with contingency – the new occupants, material degradation, service maintenance, weather, structural additions, and even new meaning, from changes in the *zeitgeist* (Till 2009:46). Architecture’s dependency on (or mercy from) forces beyond the control of the architect, makes architectural space an “event”. More simply, it is always contingent, and never fixed or static at a given time (Jordaan 2015:117).

## **COSMOGONY: A MYTHIC INTERPRETATION OF HISTORY**

Cosmogony is defined as the study of the origin of the universe, both scientifically and within mythology. Mythology is regarded as the primitive precursor of modern science and history before rationalisation and methods took over. It is both a function of “story” and an explanation of how things came to be. The Stoics of Ancient Greece defend mythology by reinterpreting it as metaphysical and moral allegory (Segal 1999:16-19). The acceptance of scientific explanations makes the mythic dimension false, or “outdated”. Yet it is the mythic that gives history its symbolic and potent meaning. It narrates not only the origins of the world but humans and their character, social rules, and morals. Moreover, the connection to primordial time connects one to the sublime or divine past (Eliade in Segal 1999:22). Usually, it is not concerned with the world, but with the expression of our understanding of the universe, and the belief that humans have limits to a power which is beyond our control (Bultmann in Segal 1999:24). Hence, science confers explanation, but through the mythic, meaning. A mythological interpretation of cosmogony offers a richer, polyvalent *episteme* of history than one experienced through the rational, scientific, and objectified.

## **3. INTENTIONS**

The intention is to reconcile the modern museum’s limitations with the contingency of history and time. This proposed history museum considers a “mythic interpretation of history”. Such an approach presents a heterogeneous and inclusive perspective and moves beyond the object into

an intangible, ambiguous, and sublime nature of history and heritage. Both ideas of mythology and ruin admit there are forces beyond the control of humanity. This openly contests the Enlightenment's viewpoint on history as a "separate", tangible, and knowable fact. The focus in a museum setting then shifts from architecture's subservience to collections, to architecture as mediation between history, collections, and public space. The proposed 2019 ICOM definition, motivates this intention to introduce museums as active role-players in the future of humanity, not as passive spectators. This will be communicated in the form of haptic exhibition spaces responding to the senses, and exhibitions designed by in-residence artists and designers.

### **PROGRAMMATIC CONSIDERATIONS**

The site of the derelict Old Staatsmuseum, within urban Pretoria, is the ideal site of intervention. Present urban conditions allow for the inclusion of public space and discourse within the context of the museum space. This involves addressing urban space at the Pretoria Zoo entrance, to serve as a transition space from the urban exterior to the urban interior. This would serve a variety of mixed uses, such as a space for the existing traders on site, a restaurant, and a public "resource centre" or library for visitors to gain general knowledge from the world's mythologies, biology, and zoology (in relation to the zoo). Having these urban programs ensure a comfortable transition in the scales from public to private use, and from social to individual. A workshop will accommodate the proposed in-residence designers and artists. The design program further considers SANBI and the NRF (National Research Fund) as custodians of the museum, to ensure the curation of collections and research undertaken. This would introduce the private realm of the museum complex, a mix of private research spaces for conservation, archives, administration offices, and meeting rooms.

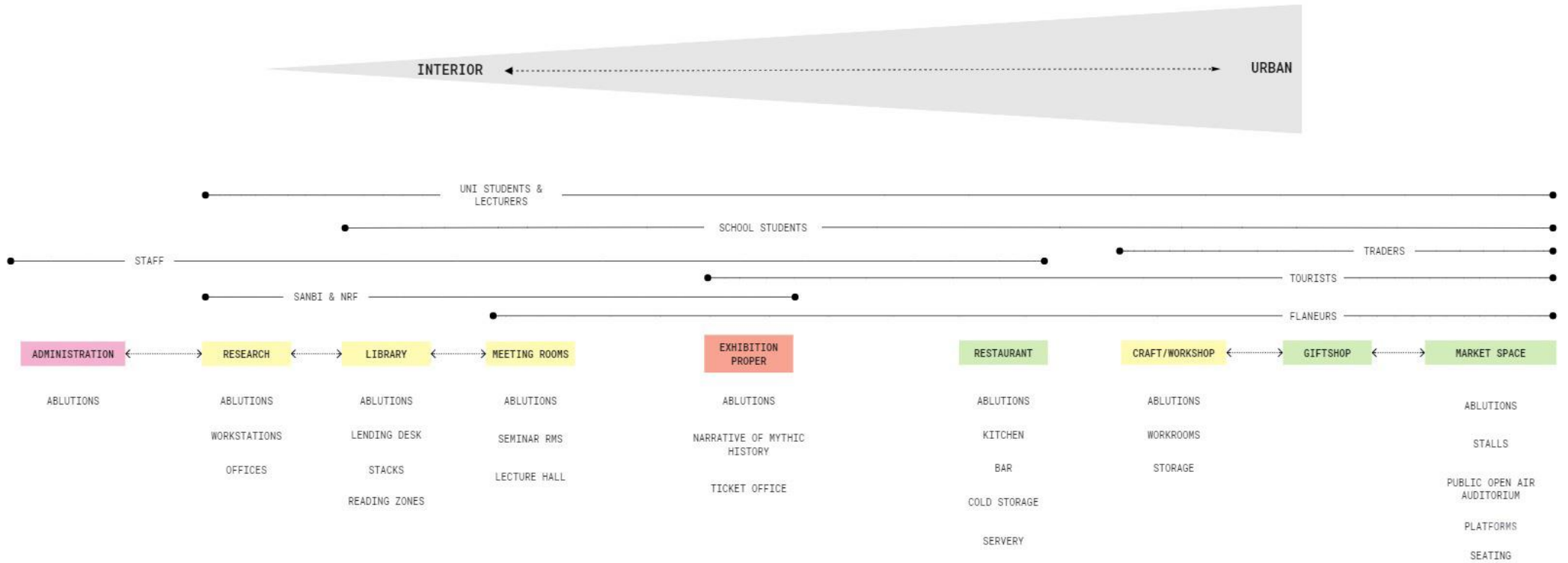


Figure 18. The range of possible programming activities and users for the proposed museum (Author 2022)

## HERITAGE RESPONSE

Using the non-dialectic framework as proposed by Barker (2020), the intervention should consist of a preliminary 1. recognition of heritage, 2. analysis, and 3. an attitude toward conservation. The Old Staatsmuseum possesses the layer of its legacy as a “temple” to history and the current layer of its ruined state. This would suggest the presence of a palimpsest (new layers superimposed over the previous). This would imply layers can be uncovered or added, to highlight and preserve significant or historic features, whilst adding new contemporary elements for its adaptive reuse. Wong (2017:111) describes this attitude as a “semi-ruined host”. Examples of this attitude include Carlo Scarpa’s Castelvechio Museum alterations, and Sverre Fehn’s Hedmark Museum to be later investigated as formal precedents.

For this building, a non-reconstructionist, palimpsestic attitude to heritage is considered, to preserve significant features in the current state of the ruined museum architecture as one layer. Such an attitude delineates the passage of time and the phenomenological experience of ruin. Additional contemporary layers would alter the building for its new programme, distinct from the existing one. This follows the intentions set out by the ICOMOS charters, Athens (1931), Venice (1964), and Burra (2013) Charters, in which new work should be distinct from existing architecture, to appreciate its cultural significance. This would also warrant a cautious approach, ensuring that the new work does not remove or overpower the cultural significance of the existing (Burra Charter 2013), but fit harmoniously or enrich the previous. To guide the heritage approach for contemporary additions, new work would consist of deriving “prototypes” from the existing architectural language (following a preliminary analysis of the architecture). This further integrates new work such that it fits harmoniously with the historic architecture yet has a contemporary stamp that subverts the old museum typology for the revised haptic typology.

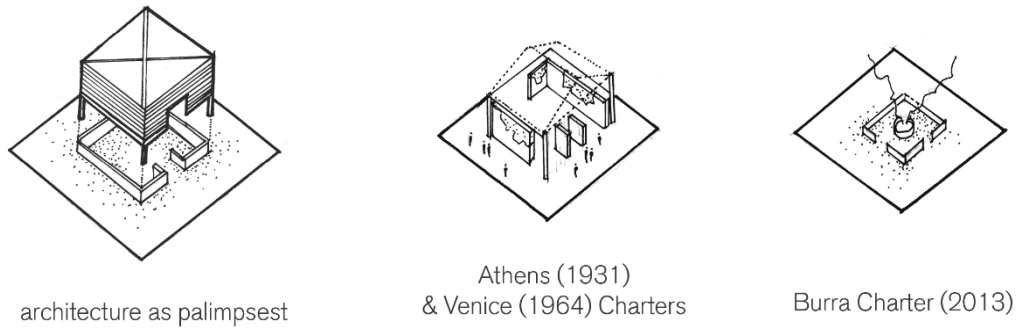


Figure 19. (left) attitude to built heritage, as a series of layers; (center) Athens Charter; (right) Burra Charter. (Author 2022)

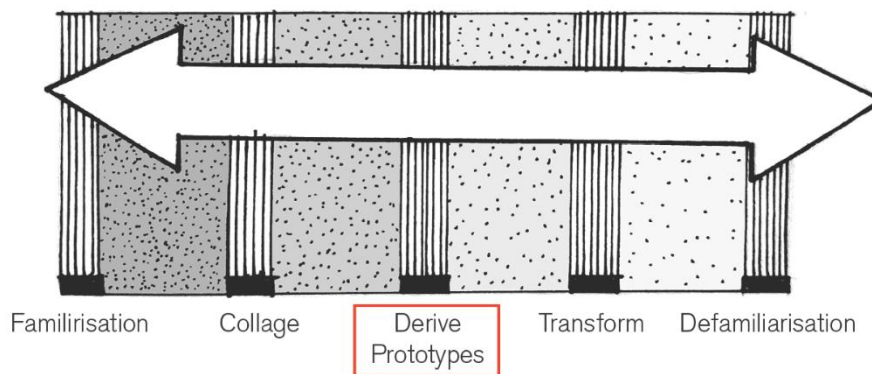


Figure 20 . A scale of non-dialectic approaches to architectural interventions in built heritage (Author 2022, adapted from Barker 2020).

## **METHODOLOGY**

Owing to the abstract, and phenomenological nature of museums, time, and mythic history, this warrants an interpretivist paradigm for this study, using a qualitative approach, to generate the design of a mythic history museum that considers contingency, ruination, and hapticity. Thus, it will begin with a literature review of museum critique, and a critical review of major museums in post-1994 South Africa to understand the changes made to local post-colonial museum culture. Alongside this, site analysis and interpretation of the Old Staatsmuseum will be conducted, through on-site observation and documentation, as well as secondary source data gathered from satellite imagery and published written work on the site history. Following this, a literature review of relevant philosophical and architectural theory will be undertaken, relating to the continuum of architectural phenomenology in time, contingency and haptics, and relevant precedent studies in the continuum of museums and heritage. These literature reviews and contextual analyses would guide the generation of design criteria, to which the new proposed museum design will be critiqued in an iterative design process. The site of the Old Staatsmuseum in Pretoria delimits the focus of this investigation. Therefore, the new interventions will be centred on this site, so relevant contextual data will only be collected for this area. Furthermore, the existing building remains closed to the public, which poses a limitation. Data can only be acquired by secondary sources or through observation with permission from the current building owners, which is the National Zoo. As this study is focused on the experience of museums and ruins, and since this site is the only existing one in Pretoria, no human participants will be directly involved in this study and ethical requirements are also limited.

## CONCLUSION

Although ICOM (still divided on this idea) has criticised museums for their fixation on collections from colonialist mentality, they have not considered the deeper roots of the modern museum as the propagator of the idea of progress and rationality. From Bauman's critique of modernity, we can see that modern museums have devolved into spaces that made history separate from the present, distinct, controlled and binary, often resulting in a mono-epistemic narrative of history where the West has prevailed. Museums have been spaces of privilege to the expert, to which the visitor is a passive observer. They have also not kept up with the evolution of the city and remain insular from public space. Furthermore, within the architectural modern paradigm, museums are primarily homogenous visual spaces, and architecture's role is often reduced to a subservient one concerned with pleasing the eye. South African post-colonial museums have made attempts to move past these limitations, but they have been unsuccessful. These limitations can be expanded through the introduction of ambiguity. Some of these include the transgression of ruined space, inclusion of the phenomenological haptic image, and contingent spaces that are not fixed or permanent. Additionally, it can also include the introduction of intangible mythic interpretations of history, such as mythic cosmogony. Such directions expand the singular and rational mono-epistemic narrative of history into a polyphonic, multi-layered fabric.

## **PART 2: DESIGN RESEARCH**

## INTRODUCTION

History museums decontextualised in time (general issue), decontextualised in public space (urban issue) and decontextualised in habitable space (architectural issue) warrant the introduction of factors that expand the existing limitations of the history museum. These factors include introducing ambiguity over certainty through non-rationalist or mythic explanations of history; creating multiple transitions from an open, urban public realm to a private centre; and integrating bodily senses (haptics) over ocular-centric bias. These themes, together with informants gathered from the site, literature review, precedent review, and program will form the *contextual* criteria for the design process. This will be met with the *conceptual* design criteria, generated from the architectural concept reacting to the three main issues, such as the architectural promenade, haptics, ruin, mythology, and narrative. These criteria will then inform the selection of international precedent and guide the process of design iteration.

## 4. SITE CONDITIONS

### LOCATION

The Old Staatsmuseum is located on the north-east section of Pretoria CBD on Boom Street, the northern most edge of the inner city, and terminates symmetrically on the axis of Thabo Sehume Street (formerly Andries St) as it intersects with Boom Street. The existing building is currently derelict and closed from the public and remains on the same ERF as the Pretoria NZG (National Zoological Gardens). The Pretoria Zoo forms a major part of the surround (Kusel, 2000) (Grobler, 1994)ing urban context and zone of use with its main front entrance forming part of the major public interface. This is comprised of a stone building further down Boom St, sheltering informal trading stalls selling curios for tourists. The zoo's formal entrance is a large, tall brick arch, framed by "towers". These are spatially important since they define the exterior public zone and act as an important landmark. Furthermore, is generates a pedestrian directional route and path. The Staatsmuseum itself is hidden and obscured by both vision and path, by means of a stone boundary wall that wraps around the western edge of the building, and gates along the front, street facing façade.



Figure 21. The front gateway of the Pretoria Zoo. (zoochat.com)



Figure 22. Satellite imagery of the Old Museum in 2022 (Google 2022)

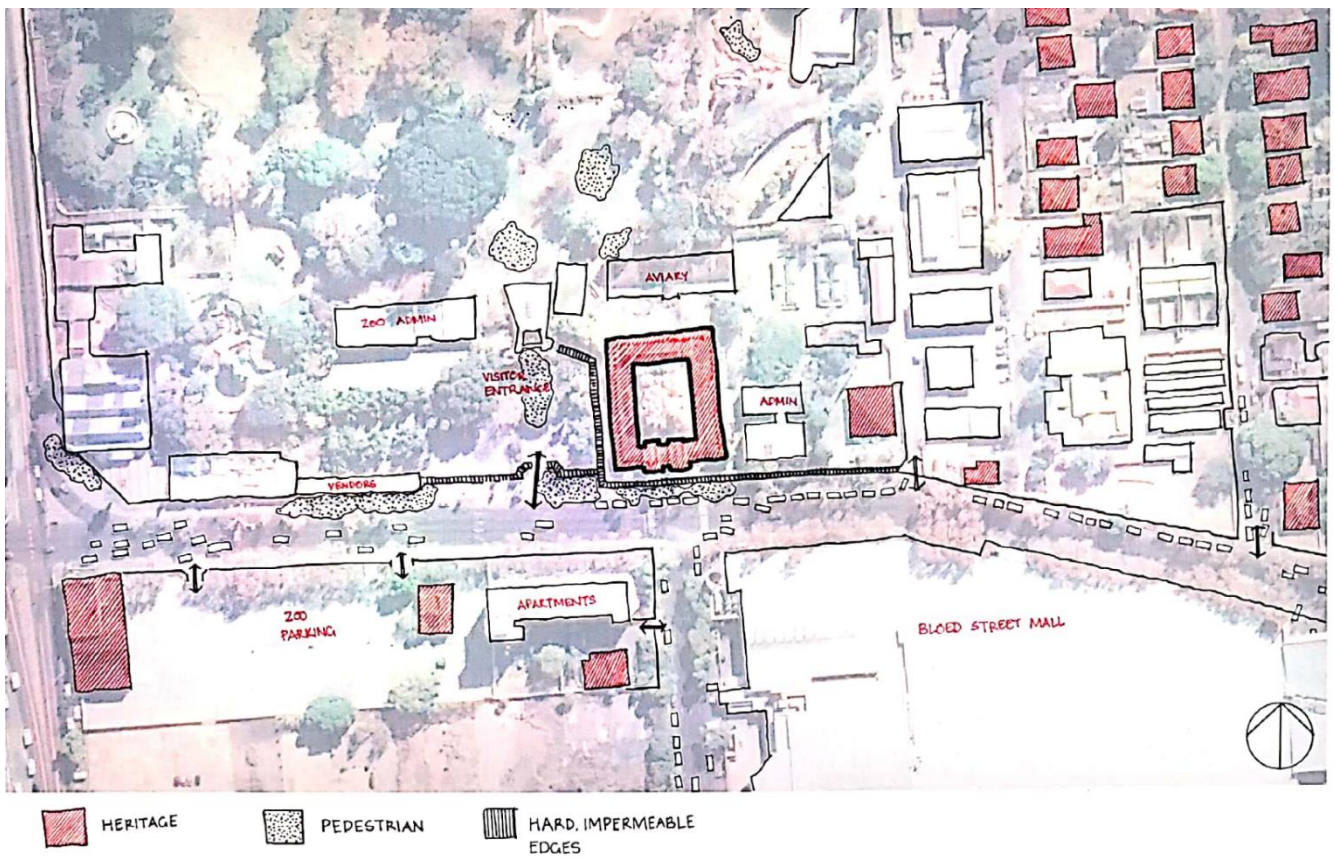


Figure 23. Site uses (Author 2022)

## HISTORY

The history of the site, its context, and the architecture of the Staatsmuseum forms part of a detailed narrative that defined the beginnings of a museum-culture in Pretoria. The property, where the Staatsmuseum stands, was originally a farmland *Rus en Urbe* (Rest in the City) which was bought by the government in 1895 as a masterplan to develop the National Zoological Gardens. These gardens were established in 1899 by Dr Jan B. Gunning, who would also become the first director of the Staatsmuseum. All these efforts were a result of the then ZAR government to catapult the Transvaal State to a level of prestige and respect (Bakker, Clarke, Fisher 2014).. The Staatsmuseum building was commissioned in 1898 to expand the existing museum collection held in the New Council Chambers. This collection consisted of natural history specimens and anthropological artefacts. At the time, the museum's mission was aimed at improving the public awareness of natural and cultural history (Grobler 1994). This new building was designed by a Dutch architect, Sytze W. Wierda, who among other immigrant architects in Pretoria at the time, worked in a Dutch aesthetic known as the "Wilhelmien" style (Bakker, Clarke, Fisher 2014). This architectural style would define the aesthetic of the Staatsmuseum, as many other early nineteenth century architecture in Pretoria. After a brief halt in construction in 1899 due to the Second Boer War, the building was completed in 1904 in the Zoological Gardens, curating natural and cultural history. These collections ballooned, and in 1913 another museum was commissioned to house the growing collections, called the Transvaal Museum (now known as the Ditsong Museum of Natural History) on Paul Kruger Street (Kusel 2000). However only the natural history collections were moved, since this newly built museum was already too small. In the decades that followed, the Staatsmuseum began to deteriorate physically, and in 1990 a burst water pipe flooded the eastern wings, and again, another water pipe burst and flooded the western wings in that same year (Kusel 2000). Consequently, the museum permanently closed its doors due to the severity of the damages to both the building, and collections, which were moved to the present-day custodian

museums around Pretoria. Despite several weak attempts to adapt the museum into a science centre in the late 2010s, the building remained abandoned and locked from public view.



Figure 24. Dr Nicolaas Mansvelt lays the foundation stone of the State Museum, Pretoria, 22 July 1899. (Collections of the Library of Parliament) ([artefacts.co.za](http://artefacts.co.za))



Figure 25. Transvaal Museum shortly after completion on Paul Kruger Street, c. 1912 ([artefacts.co.za](http://artefacts.co.za))

## 5. CONTEXTUAL ANALYSIS & SIGNIFICANCE

### URBAN

This highly urbanized context is characterized a busy street edge on Boom St, mainly populated by taxis and dense pedestrian traffic along the NZG zone, and Bloed Street Mall. The site is defined by extremely hard, impenetrable edges, such as the motor road blocking pedestrian access, and boundary walls. These edges define the territorial zones of use and access; however, no effort has been made to create effective transitions from the most public edges (street vendors and zoo entrance) to most private (such as the NZG and SANBI administration blocks). The site spatial forces of direction and gathering are defined further by on-site axes generated by the symmetry of existing zoo entrance and the Staatsmuseum building façade.

### ARCHITECTURAL

In its current architectural form, the Old Staatsmuseum hovers in a state of constant ambiguity and contradiction, as a localised relic of Western Classical architectural canon, ad-hoc additions, and an urban ruin.

#### **Idealised condition: the temple**

The Staatsmuseum was intended to be a museum of modest means, introverted and quiet, to serve the needs to Pretoria's burgeoning interest in heritage and culture within the new zoo. As such the architectural intentions of the original design reflects this, such as the courtyard, common-sense massing and roof form, and simple circulation flow between peripheral exhibition rooms,. Furthermore, it reflects popular design decisions for museums to be designed in this fashion, such as Leo von Klenze's Glyptothek or the British Museum before its alterations. In its design, the

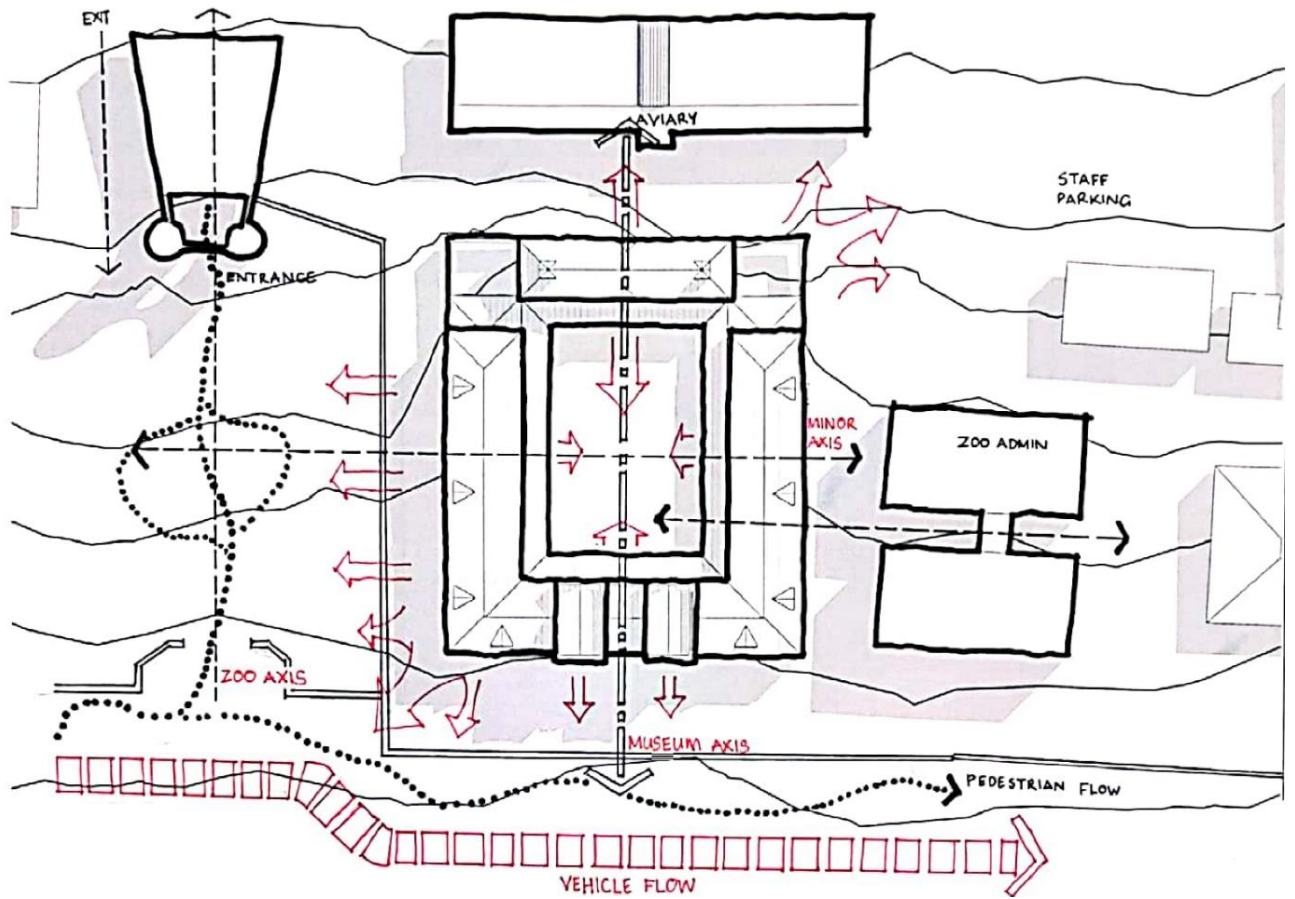


Figure 26. Site dynamics & spatial flow (Author 2022)

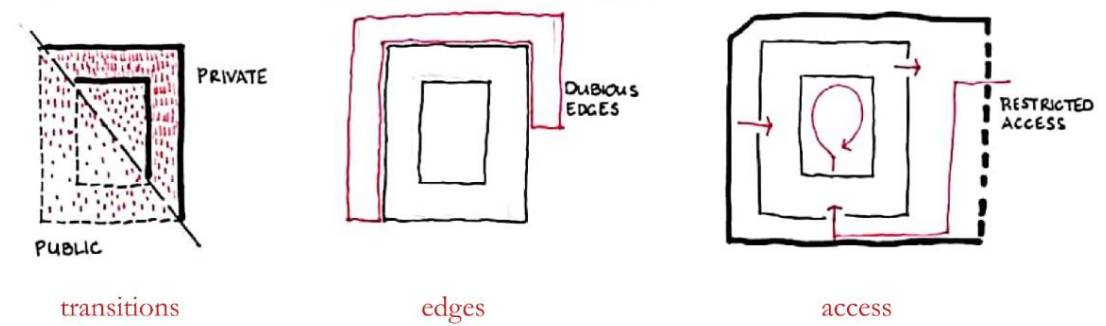


Figure 27. Site territories (Author 2022)

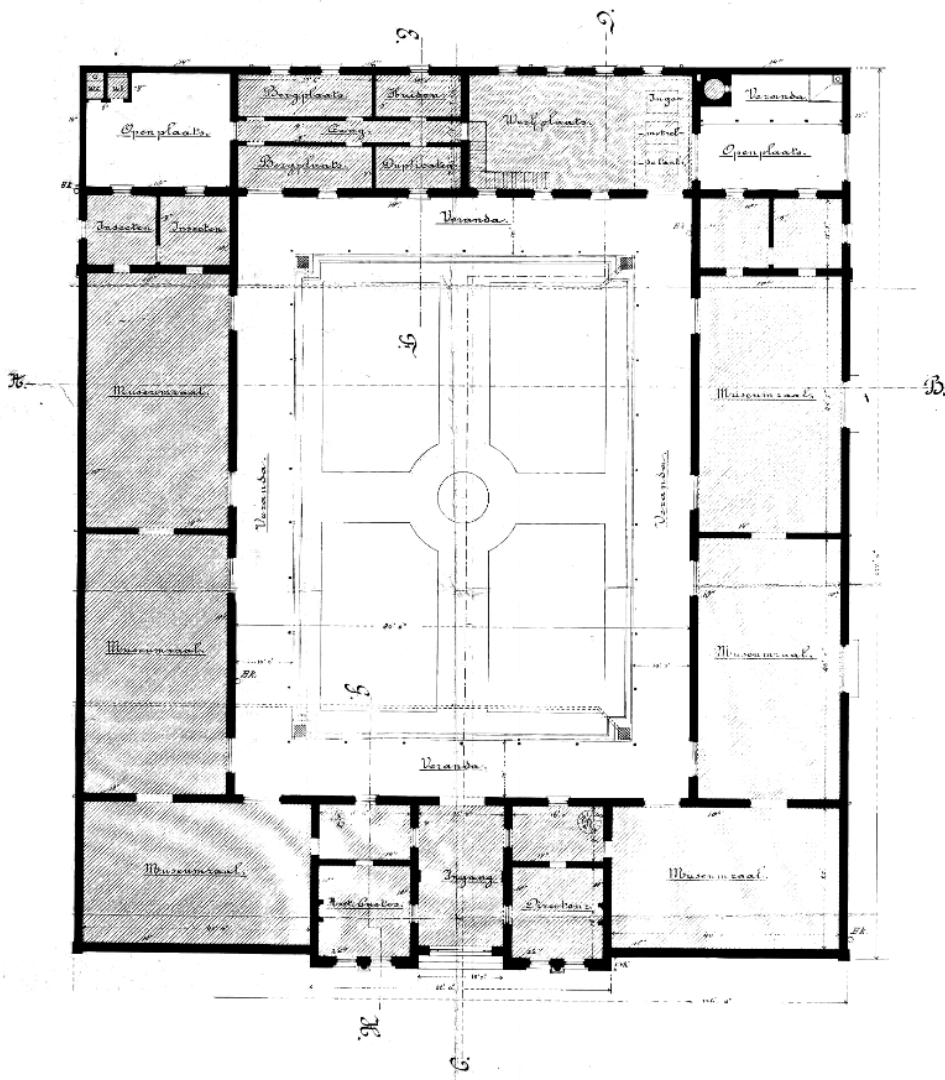
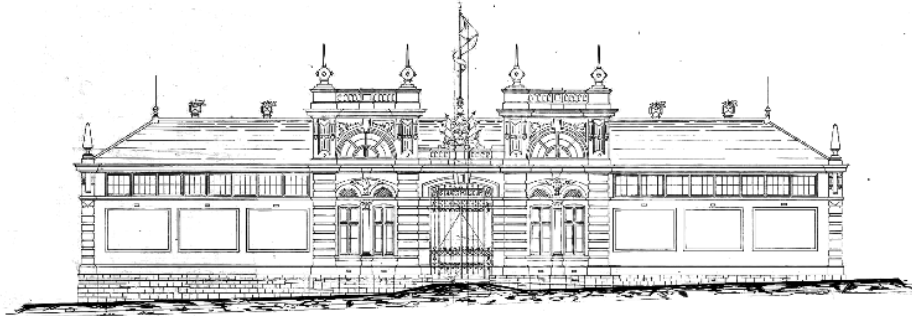


Figure 28. Elevation of Old Museum (above) / Plan (below) (UP Archives)

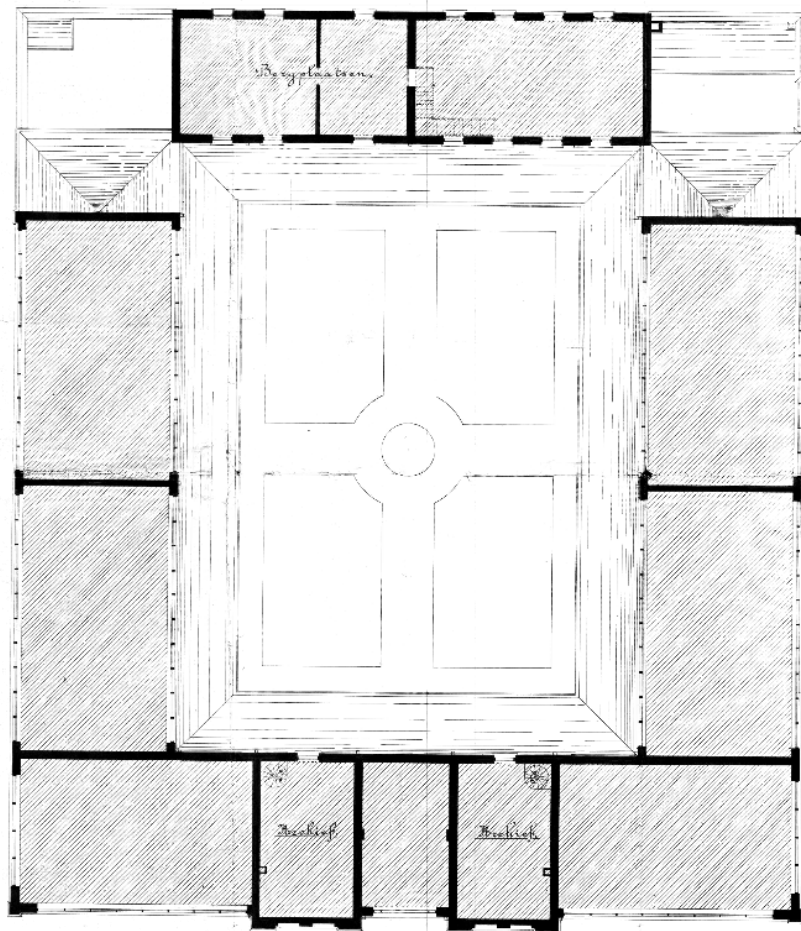
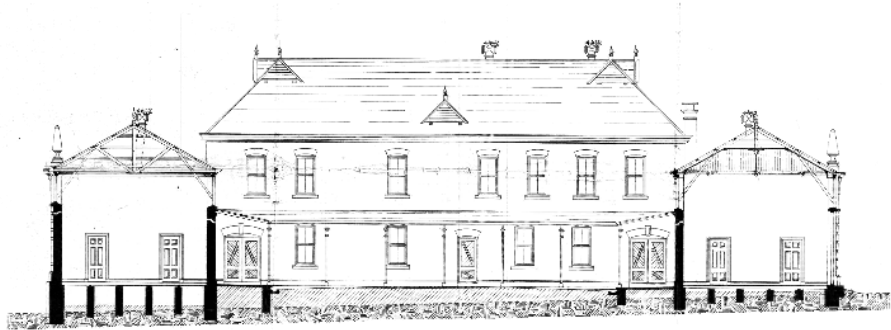


Figure 29. Section of Old Museum (above) / Upper plan (below) (UP Archives)

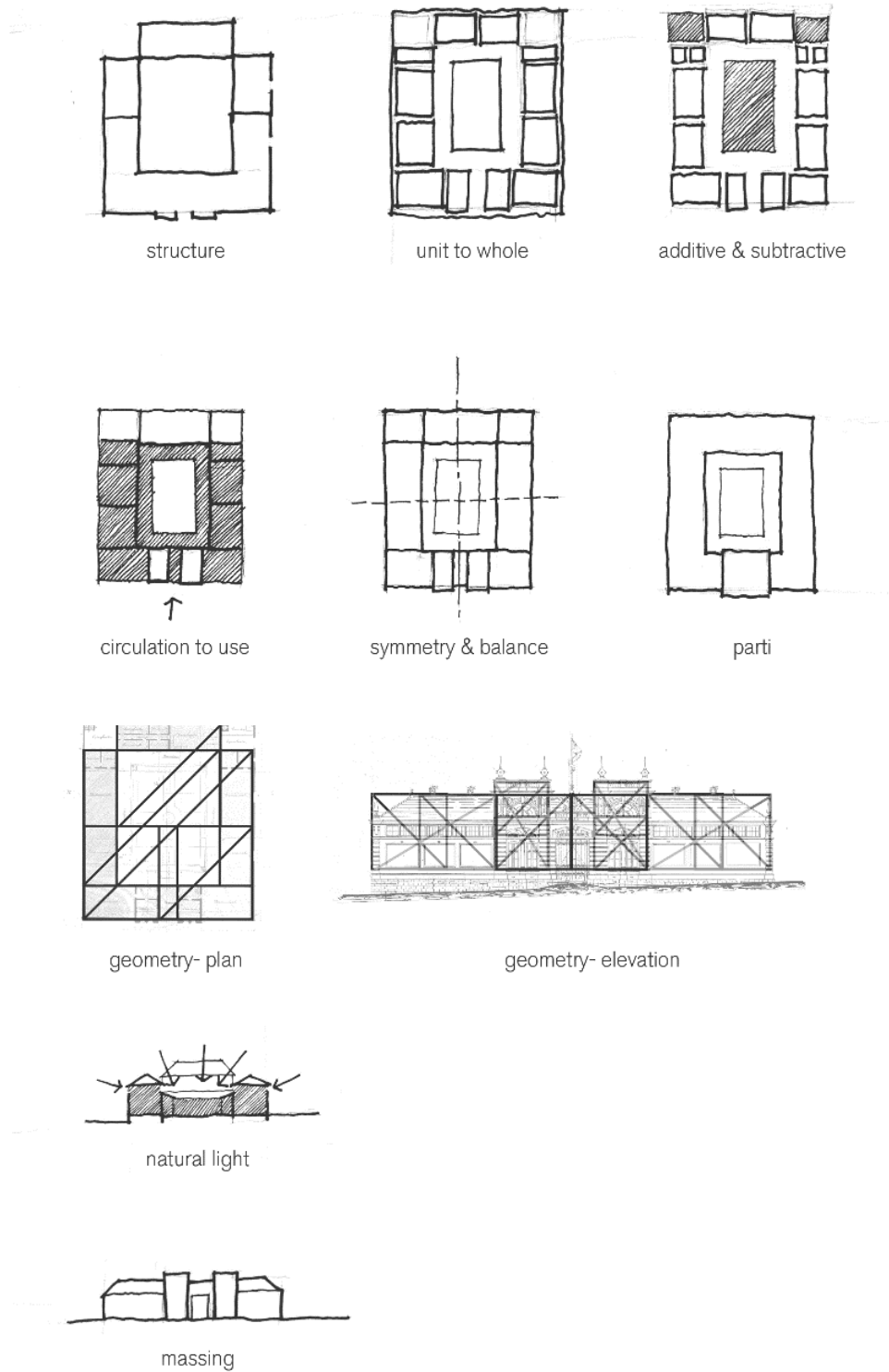


Figure 30. Architectural analysis (Author 2022)

architect has worked in making sure the building is harmoniously proportioned, in its room planning as well as in elevations, and scaling of building elements such as mouldings and decoration. As with Classical pre-Modern architecture, the building is divided into a tripartite structure, having a rusticated base (serving as a ventilated crawl space) a middle portion, and a roof level. The building is also designed with the 1895 zoo context in mind, by focusing the building frontal axis on Andries Street (now Thabo Sehume St), creating a public edge, and a transition into a private urban interior of the courtyard space, whilst making an increased private territory for curators, archivists and services towards the zoo interior. Over the decades, as urbanization and zoo tourism increased, this became at odds with the original intention and character of the Staatsmuseum, and it is no surprise even with its faded charms, it continues to remain derelict and stagnant in use.

### **Existing condition: the ruin**

In the present-day condition of the building, it resembles a place of uncontrolled entropy, decay, silence, and unease. Undisturbed since its abandonment, save for the occasional trespassing urban dweller or researcher, nature has taken its course over the walls, structure, floors, ceilings and roof. Vines slither up and old plasterwork peels from walls, the waft of rotting leaves, taxis hooting in the distance, and the precarious and perilous nature of the decayed floor brings an assault to the body and the senses onto the unsuspecting visitor (see Appendix B for additional site photos). This reaffirms the position held by (Trigg, 2010) where ruination is indifferent to artifice or the potential “narcissism” of memory and nostalgia. Moreover, it bears witness to the twisted shape of history and time, in its contingent process the defies that stable order. The ruin is bringing together the perception of the body and integration of the senses. The spontaneous decay of edges and boundaries cause disruption in our ability to orientate ourselves in the ruinous space. This subversion from sanitised surfaces from the order of things connects us to a deeper level of

understanding with place. The ruin itself is the very manifestation of the contingency (Till, 2009) and the hapticity (Pallasmaa, 2012) that connects architecture with time, something that the museum type has rarely integrated in its curated narrative of history.



Tactition (touch)



Vision (sight)



Audition (sound)



Olfaction (smell)



Gustation (taste)



Kinesthesia (muscle & bone)



Thermoperception (heat)



Nociception (pain)



Equilibrioception (balance)

Figure 31. The ruins of the Old Museum, shown in the nine bodily senses (Author 2022)

## 6. LITERATURE REVIEW

### TIME, HISTORY & CONTINGENCY

Time, as understood today primarily in the West, is a construct that has its roots in the Enlightenment (Walsh 1992:10). To the Ancient Greeks, time was known as qualitative (*chronos*) and qualitative (*Kairos*) where the former was concerned with the structure of numbers and divisions, and the latter concerned with perception and meanings (Louw 2020:14). By the Middle Ages, time was considered an enigma, an entity of destruction associated with death and “end of all things”, influenced by Judeo-Christian beliefs. It wasn’t until the Scientific Revolution of the 15<sup>th</sup> century onwards that time became quantitative, measurable, and signified *progress* which had consequently stripped much of the qualitative, even existential dimension it was imbued previously.

This stripping of this mystical, contingent and existential quality of time, had changed the way the past was represented, which had an influence on the emergence of museums. For pre-modern societies, history was known through place and objects that contained physical tangible phenomena, or “time-marks” that lended a temporal depth of special meaning. The Enlightenment model of progress meant an increasing tendency for the past and history to have linear causality, limited contingency and separate from society (Walsh 1992). This lineation of history and events also meant a distancing of the present as a “transition in time to be consumed” in the anticipation of the future (Habermas 1987 in Walsh, 1992:13), and a concern for man’s position in the order of things and place in the universe, but unlike the mythical and mystical structure of the ancient and pre-industrial societies, this was approached as a fleeting, static “succession of instants” (Till 2009:85). For the modern museum, the representation of the past was manifested through static and objectified displays, decontextualised and sterile (Walsh 1992:18) and “outside of time”.

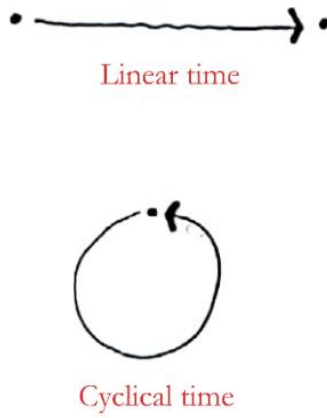


Figure 32. The Judeo-Christian model of time, as a linear function (above) / The Eastern model of time, as a cycle of birth, annihilation & rebirth (below) (Author 2022)

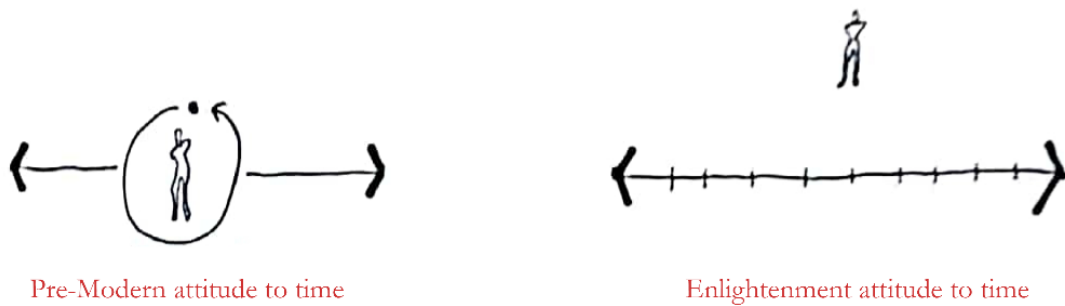


Figure 33. Pre-Modernists (left) accepted time as a spiritual force outside their control. The Early Modern (Enlightenment) saw time as a quantity, abstract and without meanings it had before (right) (Author 2022)

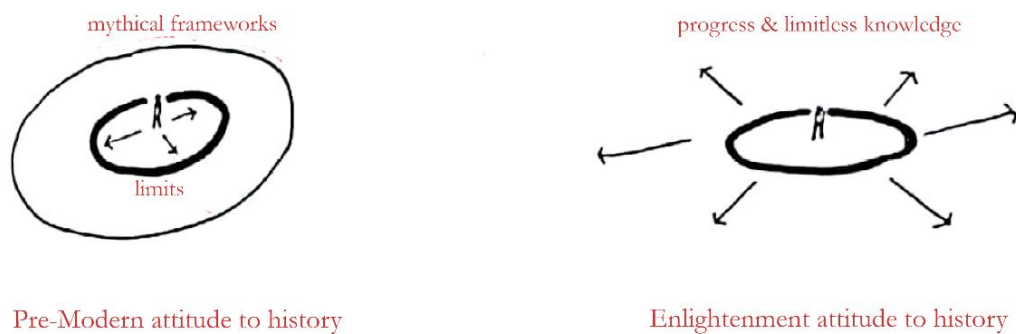


Figure 34. Pre-Modernists' view of the history of the cosmos was framed by mythology, imposing moral imperatives and existential footholds (left) / Enlightenment regarded history as progress and a limitless future governed by science. (Author 2022)

Within the history of architecture, time, as a quality, was articulated in the form of the *architectural promenade*, having its origins in ancient architecture, as a device for defense (The Tiryns fort, Mycenae) or a device for serving liturgy (Acropolis of Athens) (Unwin 2014:2013). Later, it was a device adapted by the Modernist architects (Le Corbusier) as a device of circulation efficiency. However, around the same era in 1938, Giuseppe Terragni used this as a device to tell a narrative, in a speculative project called the Danteum (Unwin 2015:116). The architecture was designed to be a memorial to Dante, the Italian poet, by using Dante’s Divine Comedy as the narrative framework for designing sequences the visitor will undertake to experience the Divine Comedy, from Inferno, to Purgatory, to culminate in Paradise **Error! Reference source not found..**

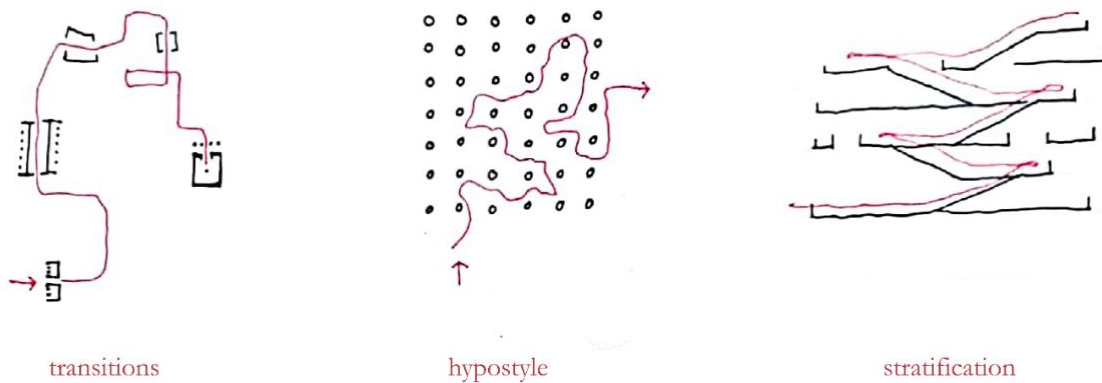


Figure 35. Spatial variations on the theme of “promenade” in architecture (Author 2022)

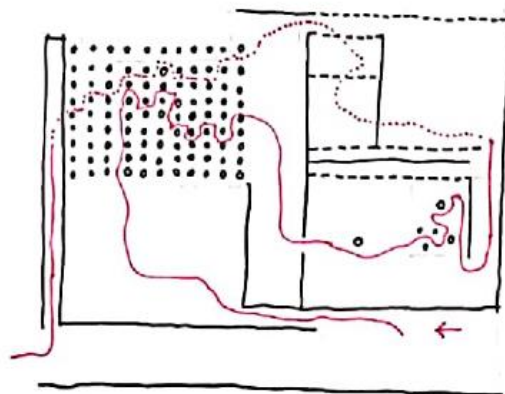


Figure 36. The Danteum in plan, with route shown (Author 2022)

## MYTHOS AS HISTORY, MYTHOS AS NARRATIVE

### Mythology's relevance

The beginning of the Renaissance and the Scientific Revolution meant a slow decline in the mythology that defined the boundaries of existence, history, and the limits to human nature. The Industrial Revolution further removed these notions, in which the resultant marriage of science and technology vindicated the new limitless power of humanity over nature and time. The mythic contained the potential to create meaning, ethics, and philosophy, which couldn't be otherwise defined or explained by science and rationality. Only through speculation, we can surmise that these mythic themes emerged from attempting to answer the question and purpose of existence. For the duration of this dissertation, it shall only be concerned primarily with the cosmogonic myths, for which serves as the expansion of the limited nature of the modern history museum being out of touch with contingent time.

### The Cosmogonic Cycle

Mythology by nature was an ambiguous, even illogical or contradictory subject, carrying colourful characters, narratives, and often universal and recurring themes that almost suggest a diffusion from an unknown centre (Witzel 2013). More importantly, in Witzel's comparison of the world's mythologies, gives rise to startling similarities and common storylines, that trace the origin of the universe (cosmogony). These mythic themes are shaped in the structure of a *narrative*, having a clearly defined beginning (creation), middle (preservation), and end (destruction). This formed the shape of history and the past before the emergence of science. Witzel describes six major themes present in the unified cosmogony:

1. Primordial chaos
2. Primordial water
3. A Giant
4. A Bull
5. An Egg
6. Floating earth & a "diver"

From these themes, came the existence of the different realms of the dead (the underworld), mortals such as humans and animals (purgatory, middle-earth) and immortals, such as gods, mortals turned heroes, or “trickster” characters (the heavens). Furthermore, the initiating of these realms involved the union of the sky and earth, personified by the “Sky Father” and “Earth Mother”.

### **Spatial translations**

Spatial expression of these mythical themes came in the form of ancient temples and sacred structures, that followed a similar pattern of common themes. Norberg-Schulz (1972) asserts for a human need for place or center, which was symbolised as the *axis mundi*, or “axis of the world”. Witzel refers to this as the “propping of the sky” which separated the realms of earth and sky through a sacred pole, tree or mountain. Hence, Norberg-Schulz considered the vertical to be the *sacred* dimension of space, representing a path that transcended the plane of ordinary reality. The *axis mundi* connected these realms together. The horizontal, therefore represents the *concrete* dimension of human action, a plane in which indicates the individual’s path from the centre to explore the unknown universe. The structure and organisation of these “realms”, dimensions and cardinal directions gave the ancients a sense of place, an existential foothold. These spatial themes manifested themselves into the architecture of temples, such as Egyptian temples organised around ritual and symbols of the soul’s journey to the afterlife, using telescoping spaces hierarchically on a axial path. Furthermore, the tension of a center and a path creates a natural dichotomy (Norberg-Schulz 1972). The static center articulates the idea of eternity and stability, often with roots in the East, expressed in a liturgy of circumambulation. The dynamic, linear path conveys the idea of liberation and salvation in the experience of a journey, found often in Judeo-Christian architecture.

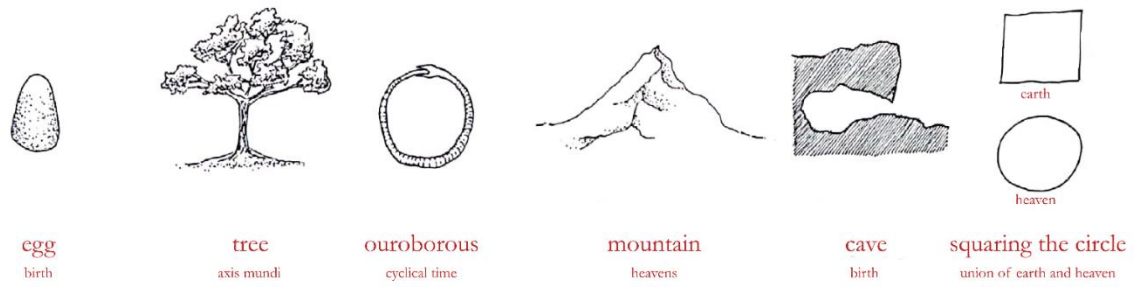


Figure 37. The primordial forms of mythic cosmogony (Author 2022)

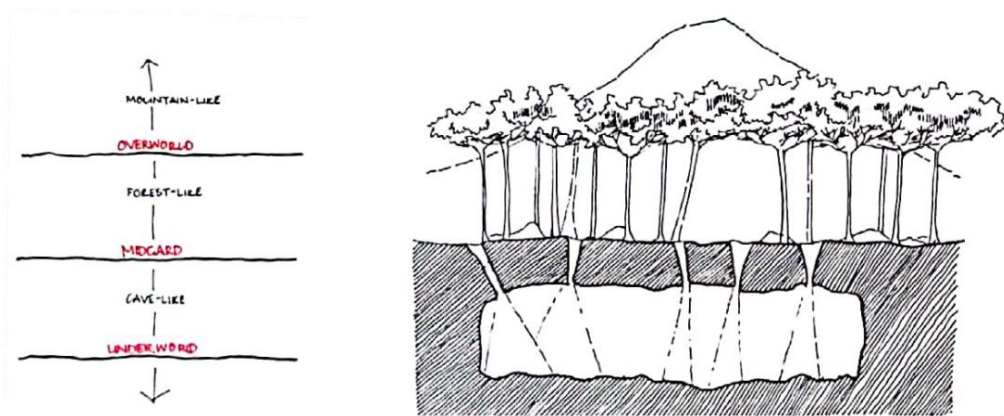


Figure 38. The three realms defining the mythic cosmos (Author 2022)

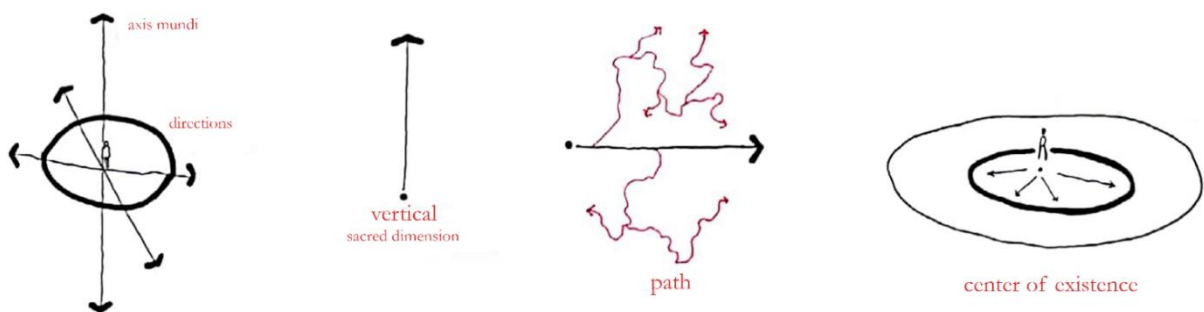


Figure 39. The spatial translations of the mythic themes (Author 2022)

## AGING & IMPERMANENCE

Till (2009) asserts that it is time that architecture tries to transcend or escape, as referenced by Karsten Harries, architects make buildings to guard against the “terror of time”, (Harries in Till 2009:79) and regarded as the enemy and to be eliminated. This represents an uncertain or ambivalent context (Bauman 1991) in which “time-marks” (dirt, decay, damage, programmatic shifts) are denied or manipulated to abolish this anxiety. Within the context of a building ruin, this represents a realisation that the architect is not the master of destiny and there are forces beyond our control (as mythical frameworks suggested prior). Pallasmaa (2000) indicates the erosion and decay of materials marks the passage, layers and inevitability of time, and further suggesting a “comforting sense” of cultural continuity, which contemporary buildings seem to lack or fail to acknowledge (McCarter & Pallasmaa 2012:48-50). Till (2009:95) suggests that architecture should be passive enough to allow the cycles of time (diurnal, seasonal cycles) and linear time (entropy) to unfold and be expressed rather than hidden, thereby placing architecture within a “temporal dynamic continuity” (Pallasmaa 2000), opposed to an “escape” or “fleeting transition”.

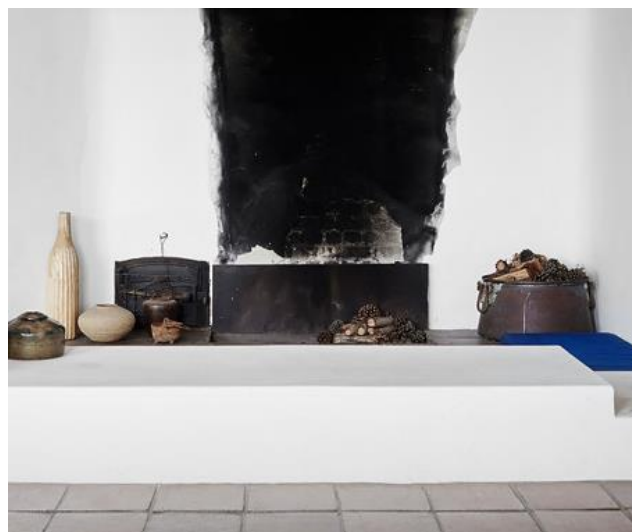


Figure 40. The fireplace at the house, Die Es (The Hearth) by Gawie Fagan, bearing a significant mark of time from soot and scorching. (ofhouses.com)

## **HAPTICITY: AGAINST OCULARCENTRISM**

As argued prior, museums (and by extension, major contemporary architecture) tend to favour vision and lack integration of the bodily sense. It is argued that there are senses beyond the accepted five, extending toward the sense of heat, pain, balance, and kinaesthesia or body awareness (Francis 2020). Pallasmaa (2000) maintains that space, matter, and time, which he considered the phenomenological building blocks of architecture, are gathered and experienced totally through the body and its perceiving “organs of sense”. It is the material dimension of architecture communicates to the body more so than the void. The rawness and tactility of a material represents the origins and passage of time: a stone’s geological origin; brick and steel through fire and heat; wood as an organic growing artefact transformed through a skilled craftsman. The expression of time, impermanence and character are experienced by the senses through these materials. Even beyond the superficial sensuousness of material, the experience and existence of the world is revealed in the body and memory and possibly a subconscious narrative in the age and decay of material. For the museum type, this gives architecture the potential to move beyond providing a place or frame for exhibitions or displays, but to become the story *itself*.

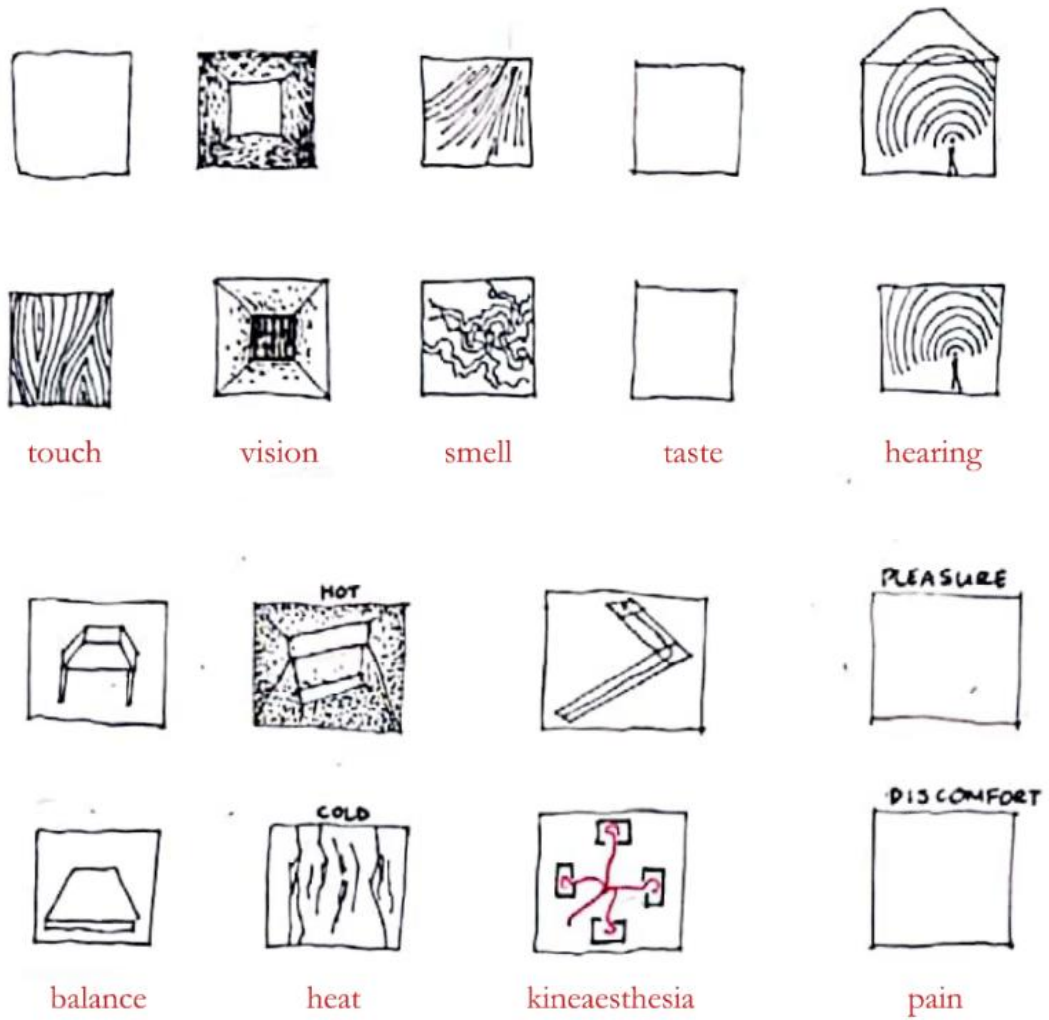


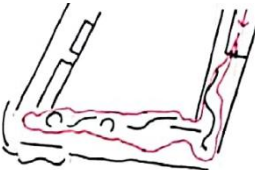

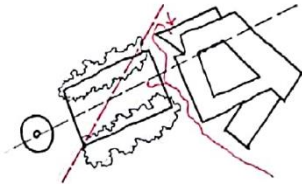

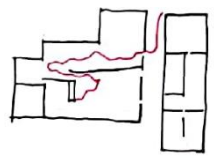





Figure 41. The five major organs of sense, and the four minor senses Author 2022)

**PRECEDENT: A REVIEW OF POST-1994 MUSEUMS**

Although the architecture and narrative “landscape” of the South African history museum in the post-apartheid era has made a radical shift from its initial colonial origins, the same issues persist: that of the absence of a contingent past; transitions from the urban exterior to the urban interior; and moving beyond ocularcentric interfaces framed by architecture. To identify these issues, a critical review of major post-1994 museum was done, using the criteria of the three issues discussed in Chapter 1.

VIRTUES	PRECEDENT	CRITIQUE
<ul style="list-style-type: none"> <li>• Contingent</li> <li>• Non-linear time</li> <li>• Spatial/haptically focused</li> <li>• Contextual</li> <li>• Non-narrative</li> </ul>	<p><b>Red Location Museum</b> 1995 Noero Wolff Architects New Brighton, PE</p>  	<ul style="list-style-type: none"> <li>• Mismatched program between museum and urban context</li> </ul>
<ul style="list-style-type: none"> <li>• Connection to a violent history and memories</li> <li>• Spatially focused</li> </ul>	<p><b>Apartheid Museum</b> 2001 Mashabane Rose Johannesburg</p>  	<ul style="list-style-type: none"> <li>• Time as linear progress</li> <li>• Visually focused</li> <li>• Strict narrative</li> <li>• Permanence &amp; preservation</li> </ul>

<ul style="list-style-type: none"> <li>• Connection to a violent history and memories</li> <li>• Responds to context</li> </ul>	<p> <b>Hector Pieterse Museum</b>            2002            Mashabane Rose            Soweto         </p>  	<ul style="list-style-type: none"> <li>• Time as linear progress</li> <li>• Visually focused</li> <li>• Strict narrative</li> <li>• Permanence &amp; preservation</li> </ul>
<ul style="list-style-type: none"> <li>• Connection to deep history</li> </ul>	<p> <b>Wits Origin Center</b>            2008            Mashabane Rose            Johannesburg         </p>  	<ul style="list-style-type: none"> <li>• Time as linear progress</li> <li>• Visually focused</li> <li>• Strict narrative</li> <li>• Permanence &amp; preservation</li> </ul>
<ul style="list-style-type: none"> <li>• Loose narrative</li> <li>• Responds to context</li> </ul>	<p> <b>//hapo Museum</b>            2009            Mashabane Rose            Pretoria         </p>  	<ul style="list-style-type: none"> <li>• Time as linear progress</li> <li>• Visually focused</li> <li>• Permanence &amp; preservation</li> </ul>

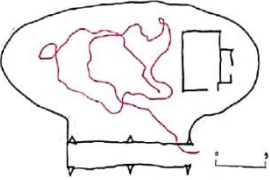


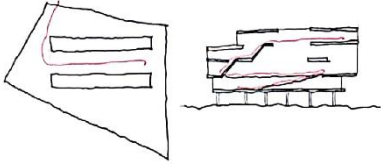



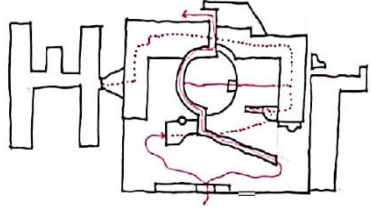

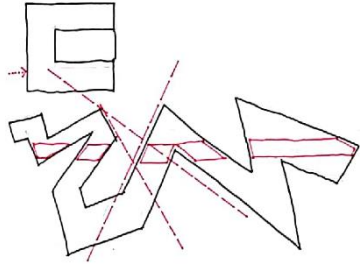
<ul style="list-style-type: none"> <li>• Spatial/Haptically focused</li> <li>• Loose narrative</li> <li>• Responds to context</li> </ul>	<p><b>Maropeng Experience Lab</b> 2017 Office 24-7 Architecture Cradle of Humankind, Gauteng</p>  	
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Image sources:

- **Red Location** <https://www.noeroarchitects.com/project/red-location-museum/#:~:text=The%20Museum%20is%20located%20at,of%20museums%20in%20South%20Africa.>
- **Apartheid Museum** <https://todo.africa/wp-content/uploads/2019/08/Apartheid-Museum-gallows-4-960x1149.jpg>
- **Hector Pieterse** Museum [https://www.cipdh.gob.ar/memorias-situadas/wp-content/uploads/2019/02/446073025\\_99a9ef8925\\_b.jpg](https://www.cipdh.gob.ar/memorias-situadas/wp-content/uploads/2019/02/446073025_99a9ef8925_b.jpg)
- **Wits Origin Center** <https://www.wits.ac.za/media/wits-university/campus-life/origins-centre/images/schools.png>
- **hapo Museum:** [http://thetravellingcamera.co.za/wp-content/uploads/photo-gallery/Freedom\\_Park\\_-\\_Pretoria/Pretoria\\_Freedom\\_Park\\_-\\_Museum\\_2013\\_\(5\).jpg](http://thetravellingcamera.co.za/wp-content/uploads/photo-gallery/Freedom_Park_-_Pretoria/Pretoria_Freedom_Park_-_Museum_2013_(5).jpg)
- **Maropeng experience lab** [http://www.office24-7.co.za/wp-content/uploads/2017/01/OFFICE247\\_EXPERIENCE-LAB\\_12.jpg](http://www.office24-7.co.za/wp-content/uploads/2017/01/OFFICE247_EXPERIENCE-LAB_12.jpg)

**PRECEDENT II: CONCEPTS**

PRECEDENT	SPATIAL ROUTE	CONCEPTS
 <p><b>Acropolis Museum</b> 2011 Bernard Tschumi Architects Athens, Greece</p>		<p><b>Promenade</b> Narrative Ruin Haptics Mythology</p>
 <p><b>Hedmark Museum</b> 1967 Sverre Fehn Hamar, Norway</p>		<p><b>Promenade</b> Narrative <b>Ruin</b> Haptics Mythology</p>
 <p><b>Neue Staatsgalerie Extension</b> 1977 Stirling &amp; Gowan Stuttgart, Germany</p>		<p><b>Promenade</b> Narrative <b>Ruin</b> Haptics Mythology</p>
 <p><b>Jewish Museum</b> 1988 Daniel Libeskind Berlin Germany</p>		<p><b>Promenade</b> <b>Narrative</b> Ruin <b>Haptics</b> Mythology</p>


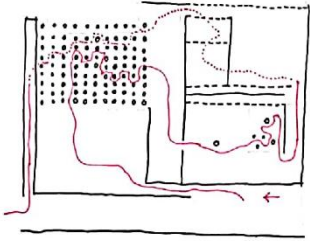

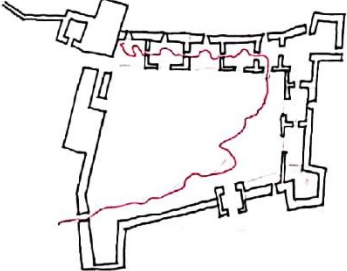
 <p><b>Danteum</b> 1938 Giuseppe Terragni (project)</p>		<p>Promenade Narrative Ruin Haptics Mythology</p>
 <p><b>Castelvecchio Museum</b> 1959-73 Carlo Scarpa Verona, Italy</p>		<p>Promenade Narrative Ruin Haptics Mythology</p>

Image sources:

- **Acropolis Museum:** <https://www.discovergreece.com/experiences/acropolis-museum-athens>
- **Hedmark Museum** [https://buildllc.files.wordpress.com/2008/01/hedmarksmuseet\\_01.jpg](https://buildllc.files.wordpress.com/2008/01/hedmarksmuseet_01.jpg)
- **Neue Staatsgalerie Museum**  
<https://images.adsttc.com/media/images/5038/090d/28ba/0d59/9b00/0a60/newsletter/stringio.jpg?1414198074>
- **Jewish Museum** [https://th-thumbnailer.cdn-si-edu.com/Mi6F8qZ7Mp1vaaGeDEbN5-Y13mY=/1000x750/filters:no\\_upscale\(\)/https://tf-cmsv2-smithsonianmag-media.s3.amazonaws.com/filer/cb/63/cb63e339-db9d-407d-93c8-d5becddf547f/jewishmuseumberlin.jpg](https://th-thumbnailer.cdn-si-edu.com/Mi6F8qZ7Mp1vaaGeDEbN5-Y13mY=/1000x750/filters:no_upscale()/https://tf-cmsv2-smithsonianmag-media.s3.amazonaws.com/filer/cb/63/cb63e339-db9d-407d-93c8-d5becddf547f/jewishmuseumberlin.jpg)
- **Danteum** [https://thearchiteer.files.wordpress.com/2016/06/1\\_copertina.jpg](https://thearchiteer.files.wordpress.com/2016/06/1_copertina.jpg)
- **Castelvecchio** [https://divisare-res.cloudinary.com/images/c\\_limit,f\\_auto,h\\_2000,q\\_auto,w\\_3000/v1481490659/x9uqwu0nncqxc92qztpn/carlo-scarpa-federico-puggioni-museo-di-castelvecchio.jpg](https://divisare-res.cloudinary.com/images/c_limit,f_auto,h_2000,q_auto,w_3000/v1481490659/x9uqwu0nncqxc92qztpn/carlo-scarpa-federico-puggioni-museo-di-castelvecchio.jpg)

## **7. DESIGN CONCEPT**

### **INTENTIONS: MUSEUM AS “MANDALA”**

#### **Main Issue**

The primary intention of the intervention is to reconcile the modern history museum’s limitations with contingency of history. This will consider the context of ruination of the Old Staatsmuseum and using the impermanence of age and decay of materiality to communicate the passage of time. Moreover, it uses cosmogonic mythology as a means of presenting history as an ambivalent continuum of time.

#### **Urban Issue**

The intervention uses the existing site conditions of the zoo, and public spaces to inform the major points of access and gathering. In addition, the museum acts as a satellite knowledge space for the Pretoria Zoo, providing the mythological origins of life.

#### **Architectural Issue**

The intervention considers the translating the mythic themes addressed from the literature review into an architectural spatial form. By so doing, this allows the architecture to become a narrative that expresses the idea of mythic history, communicated through the hapticity of material and symbols of space.

#### **Concept: The Mandala**

The intervention design uses this idea of “mandala” as a metaphor for the museum as a gateway or “portal” to higher realms, of thought and of space. In Eastern traditions, the mandala was a mythological “gateway” to higher dimensions, often used in meditation practice to achieve heightened concentration to encourage introspection. This was often in the form of a symbol of squares hierarchically collapsing inside each other.

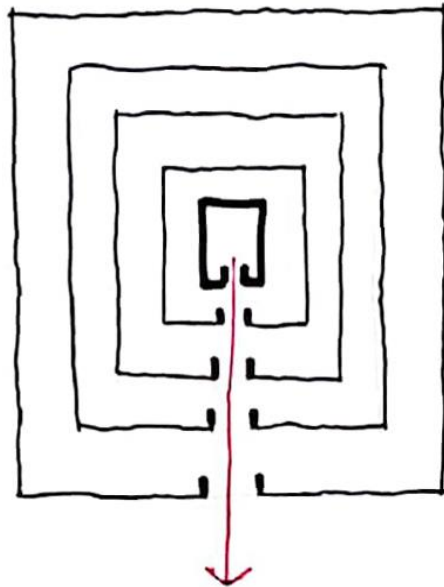


Figure 42. The conceptual parti, a series of cella-like telescoping spaces, implying axis, routes and procession (Author 2022)

This was to represent a journey of layers, leading to the inner core, cyclical nature, and impermanence. Buddhist monks would make mandalas from sand, then erase it in acknowledgment of the impermanence of things (Mark 2020).

### Heritage attitude & approach

After considering the high value of heritage in the architecture of the Old Staatsmuseum, a middling palimpsestic attitude is taken to address the heritage value of the architecture, but also to consider the structural failings and loss of character due to past alterations. This “middle ground” is situated between anti-restorative attitudes and re-restorative attitudes (Barker 2020). A palimpsest is a metaphor for the shearing of previous and new layers clashing with each other, with the intention of highlighting relevant historical significance. The architectural approach considers to derive prototypes using existing language morphology to generate new design. This straddles between the extremes of continuity and contrast (Barker 2020).

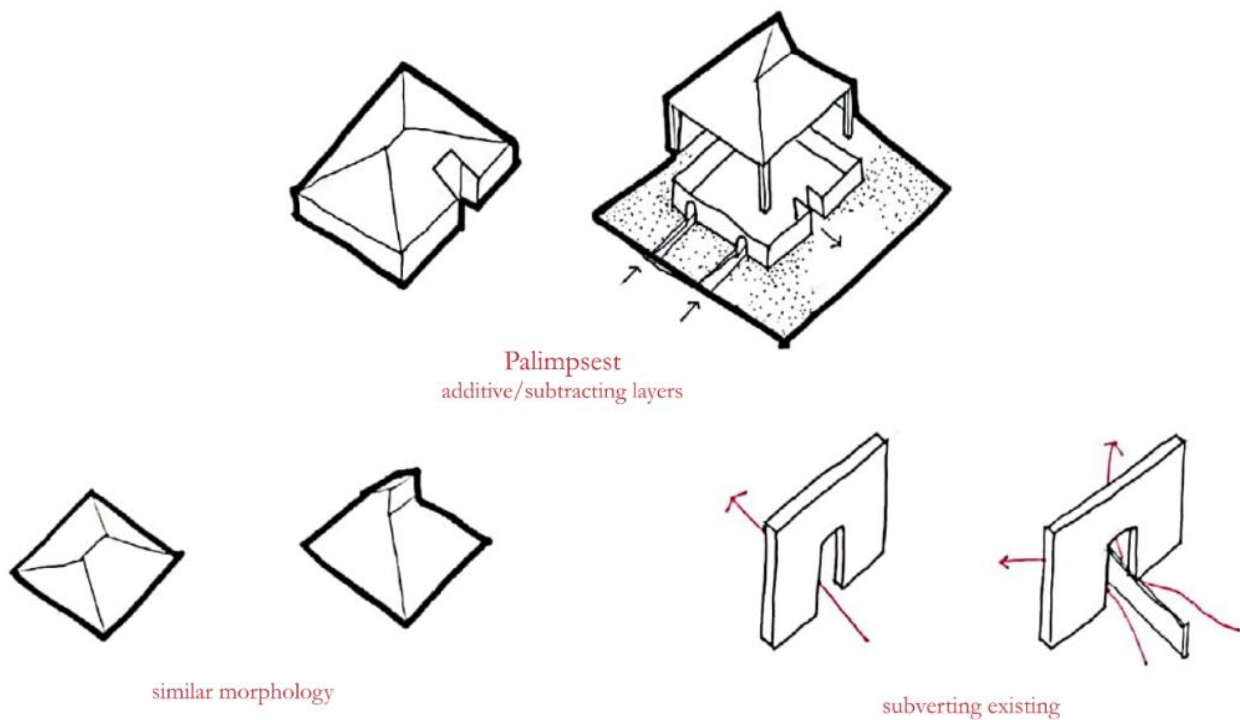


Figure 43. The architectural heritage approach uses similar morphology to the existing (Author 2022)

## PROGRAM

### Clients, users & activities

The National Zoological Gardens (NZG) or Pretoria Zoo, is the proposed client for the museum. This is considered, because the existing Old Museum is still currently under the custodianship of the NZG since its inception in 1890. As custodians, they act as the caretakers for the maintenance for the museum upkeep, and administration. Furthermore, revenue of the proposed museum goes into maintenance, energy costs, and any surplus for the zoo.

The proposed museum consists primary, secondary and tertiary activities with their respective users:

<b>PRIMARY</b>		
<b>PROGRAM</b>	<b>DESCRIPTION</b>	<b>SOCIABILITY</b>
<b>atmospheric exhibition</b>	showcasing the sensory experience of mythology and mythic themes, to be used by museum visitors, and tourists. This is experienced through the architectural design and sculptured “artefacts”.	public
<b>library</b>	acts as the “explanatory” portion of the museum, using languages, books, and related media. This would be open for public use and used for research for local students.	public
<b>SECONDARY</b>		
<b>workshop</b>	The workshop accommodates the in-house artists who create the artworks for the exhibition, incorporating studios and storage	private
<b>lecture hall</b>	The lecture hall accommodates talks from academics on mythology, history and aims of the museum, as well as being open to general hirings.	semi-public
<b>administration offices</b>	The administration offices accommodate the custodians of the museum, and day-to-day running.	most private
<b>TERTIARY</b>		
<b>restaurant</b>	acts the social front of the museum, being the most urban and situated in the public in the exterior of the zoo. It is readily accessible, and does not require a visitor to enter the exhibition area to eat here	most public
<b>Giftshop/marketplace</b>	The giftshop completes the public “front” of the museum.	most public

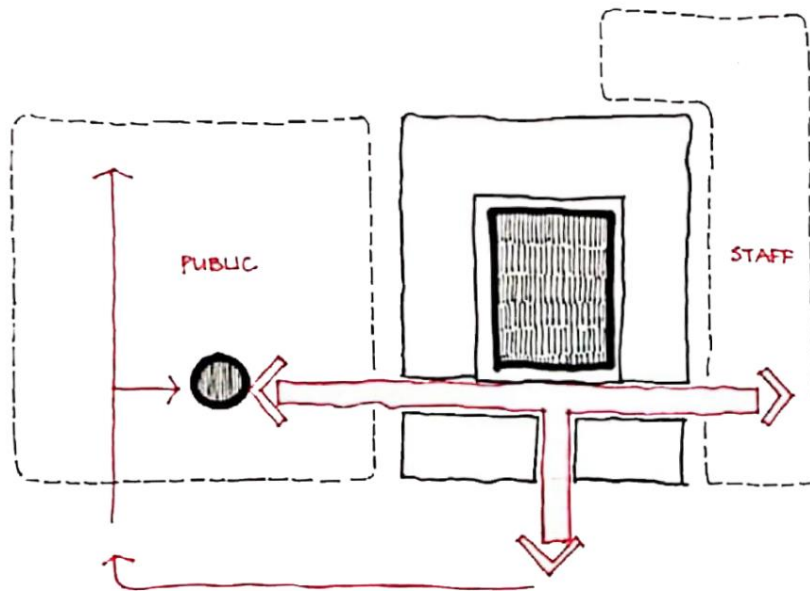


Figure 44. Defining the zones of public, mixed and private (staff) and circulation (Author 2022)

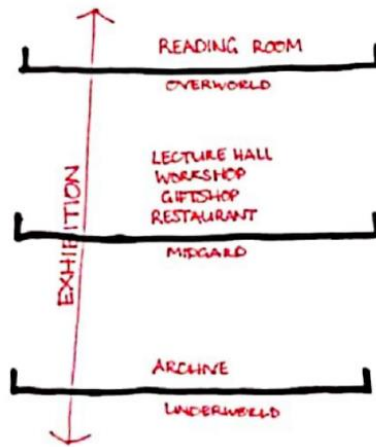


Figure 45. The program organised in the layers of the three “realms” in section (Author 2022)

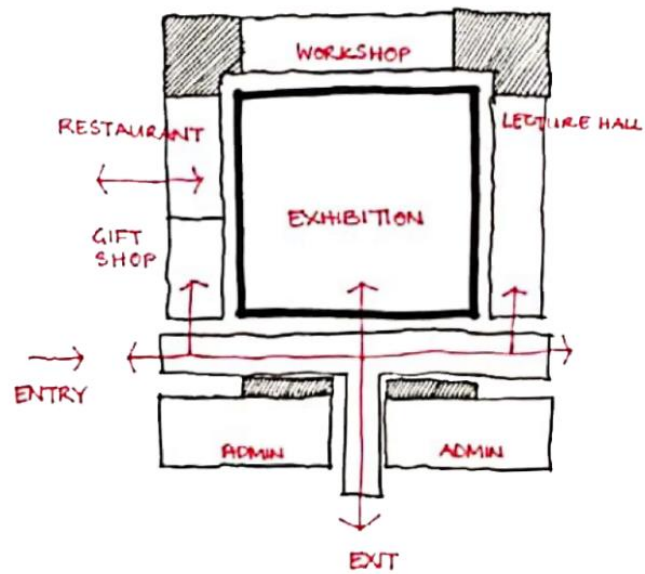


Figure 46. The museum schematic program in plan (Author 2022)

## 8. SPATIAL DEVELOPMENT I

### PRELIMINARY DESIGNS (PRIOR PRINCIPLES ESTABLISHED)

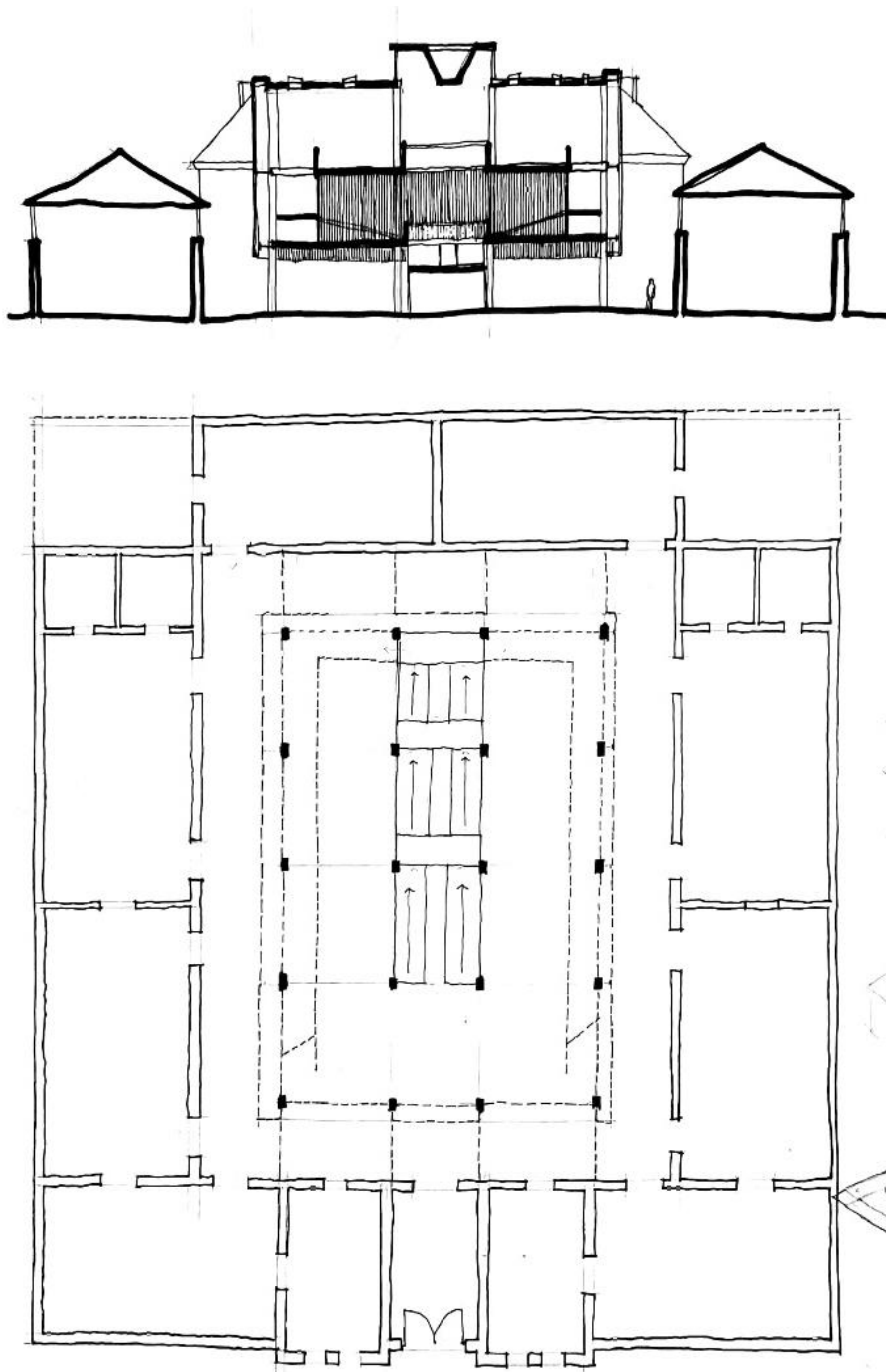


Figure 47. First conceptual design before design principles, based on a pavilion-like structure in the existing courtyard (Author 2022)



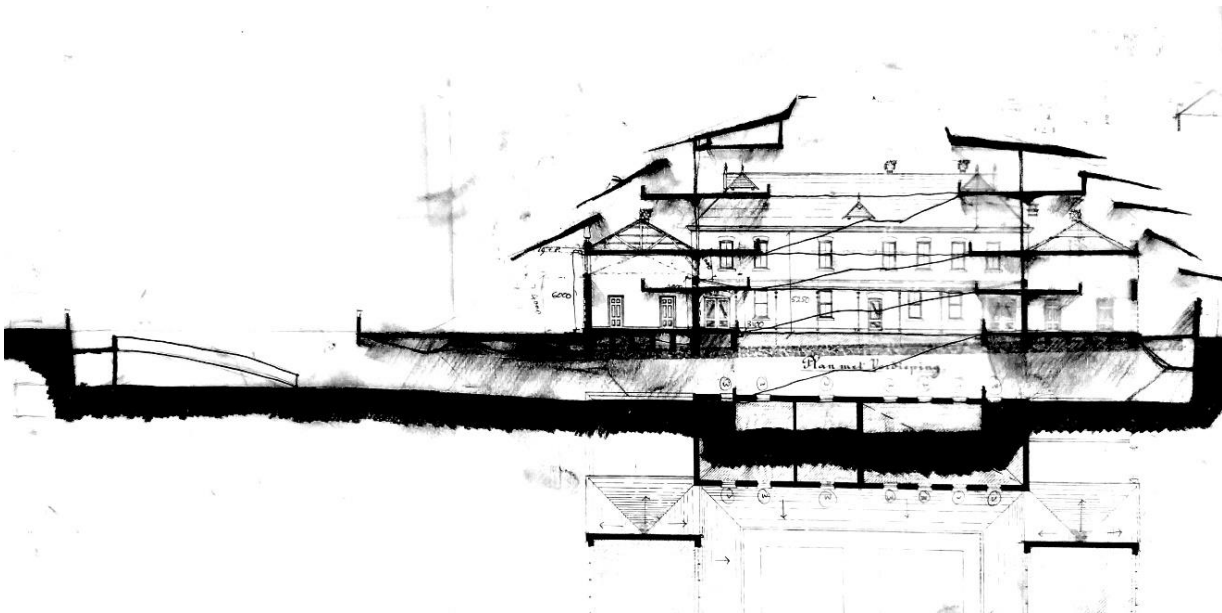
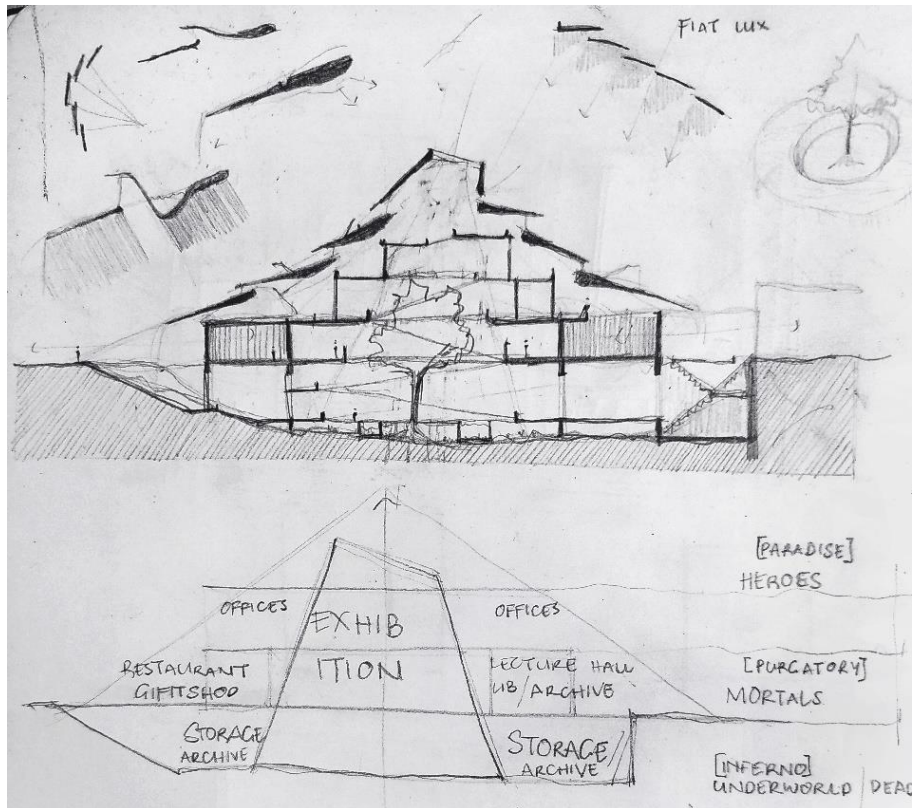


Figure 49. Third conceptual idea, based on the form of a mountain rising from the Old Museum, in reference to the primordial mound (Author 2022)

## DESIGN STRATEGIES

To guide the design process of the intervention, a set of design principles must be established to iterate the design and critique it. These principles are derived from the context and concept. The first set of criteria consist of the *contextual* informants: the three main issues, theoretical frameworks, existing site forces and program. The second set of criteria consist of the *conceptual* informants, derived from the conceptual intention, precedent study, and theory: the **architectural promenade, narrative, haptics, ruination, and mythology**.

### PROMENADE, MYTHOLOGY & NARRATIVE

The primary organising element of the intervention is the translation of major mythological themes and forms:

1. The *axis mundi* – the vertical dimension which connects to the sacred to the profane
2. The square – the earthly representation in the horizontal
3. The circle – the heavenly dimension in the horizontal

Organising these spatial forms are the three spaces which gather the earth, the sky, mortals, and gods:

1. The *Underworld* (the realm of the dead) at underground level
2. The *Midgard* (the realm of the living/mortals) at the existing ground level
3. The *Overworld* (the realm of the gods) elevated above the existing ground level

The **narrative** follows the common thread of the unified mythology as compared by Witzel (2013), from the cosmogonic cycle emanations, in primordial chaos to mortal existence and culmination in salvation. This loosely resembles the **architectural promenade**, as adapted from the Danteum to express the narrative route of Dante's Divine Comedy, which describes a similar narrative.

Moreover, the architectural promenade acts as the bridge of communication between the mythological narrative and the urban conditions. To address the urban issue, transitions, and

thresholds from urban exterior to private interior, as demonstrated in Stirling's Neue Staatsgalerie (1977) which subverts the existing museum's frontal and imposing entrance with a radically, almost pedestrian-friendly front in a series of ramps that emphasizes the external circulation of urban *flâneur* without compromising security of the museum interior.

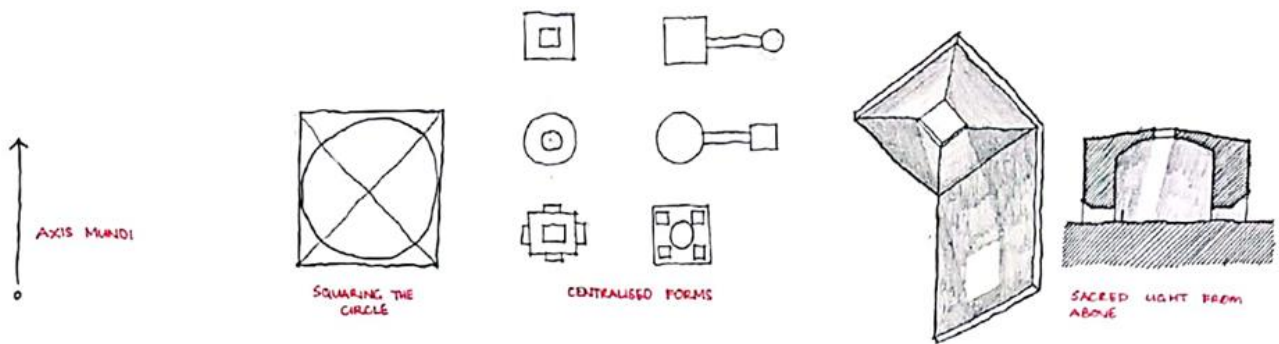


Figure 50. The “squaring of the circle” (Author 2022)

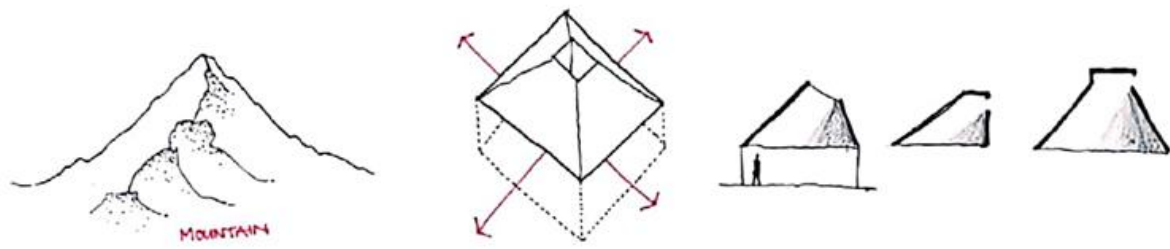


Figure 51. The cosmic heavens abode of the Sky Father, represented as a mountain, and translated spatially in a roof (Author2022)

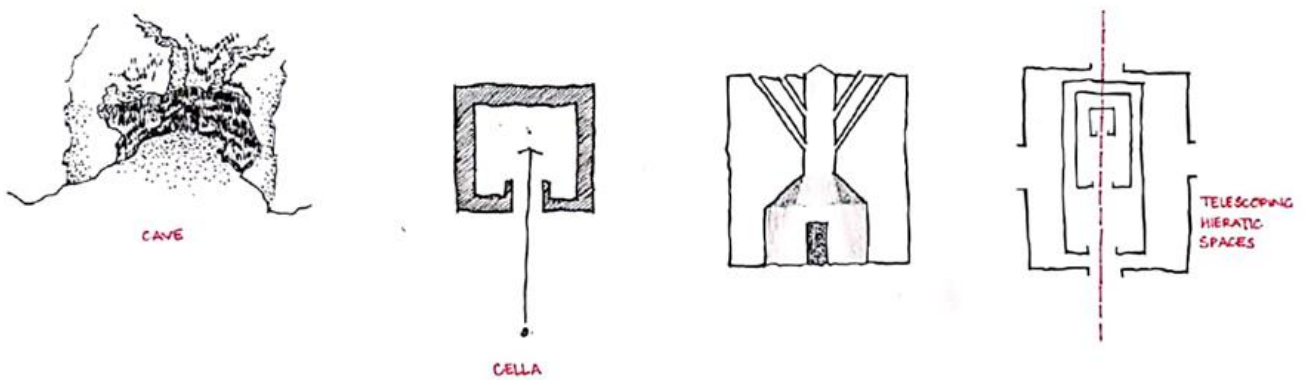


Figure 52. The primordial womb of the Earth Mother, represented as a cave and translated spatially as a “cella” (Author 2022)

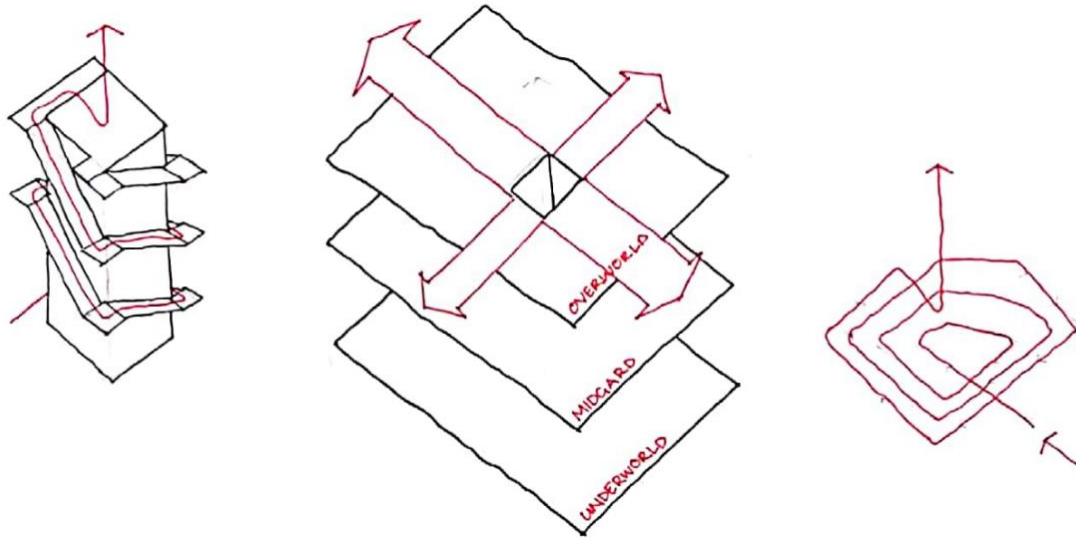


Figure 53. Organisation of a loose mythic cosmogonic “narrative”, from the darkness below to light above (Author 2022)

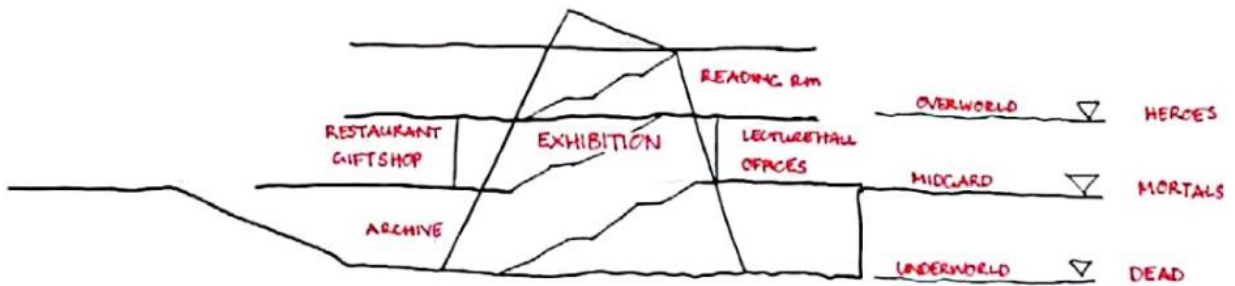


Figure 54. Vertical organisation of the cosmogonic “narrative” (Author 2022)

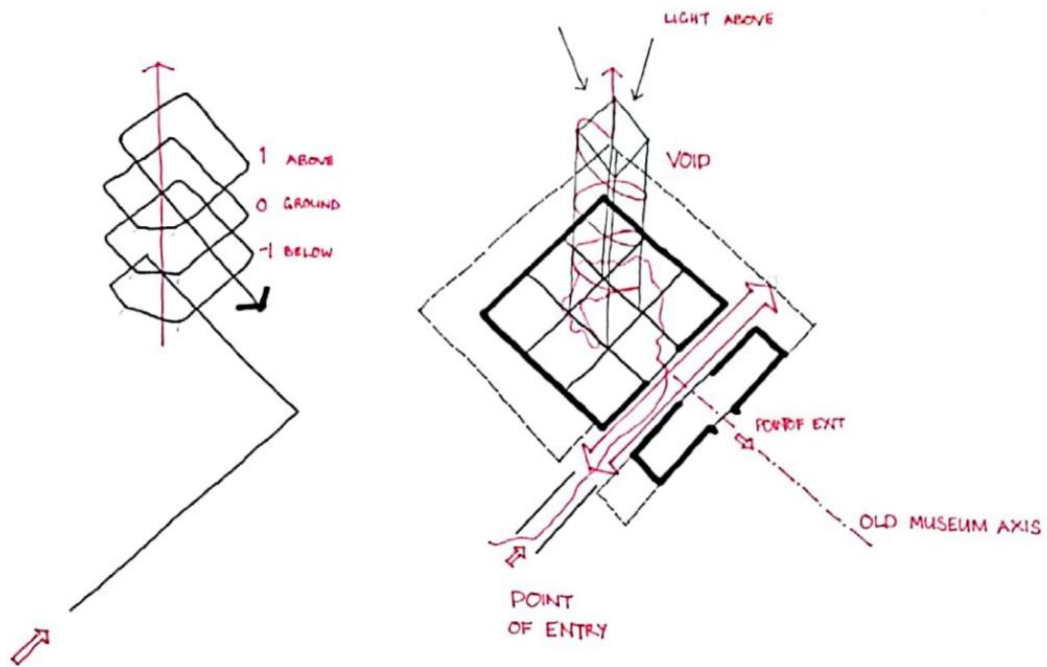


Figure 55. Vertical organisation of levels and circulation, the “promenade” (Author 2022)



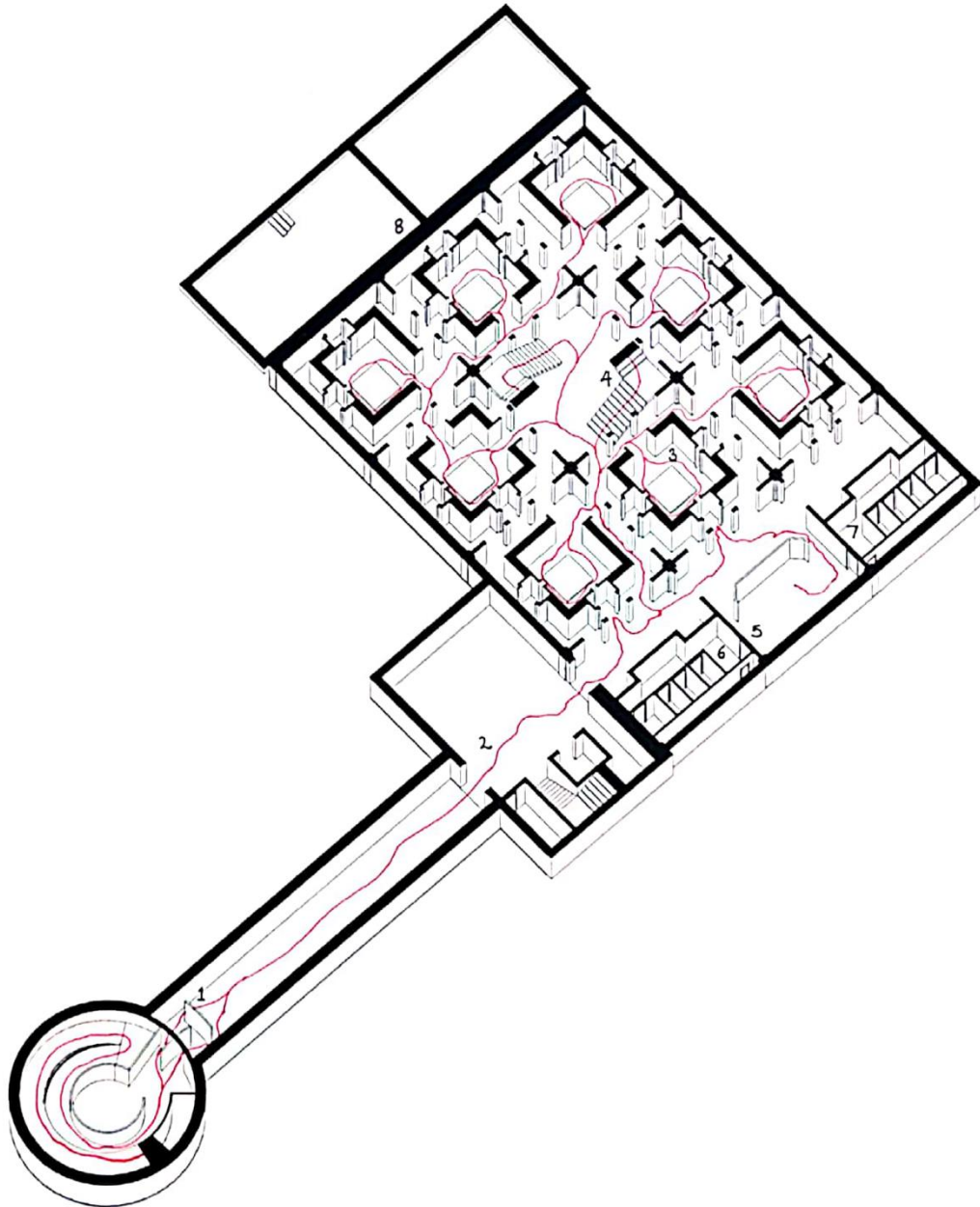


Figure 57. First design iteration, the “Underworld” beginning of the journey (Author 2022)

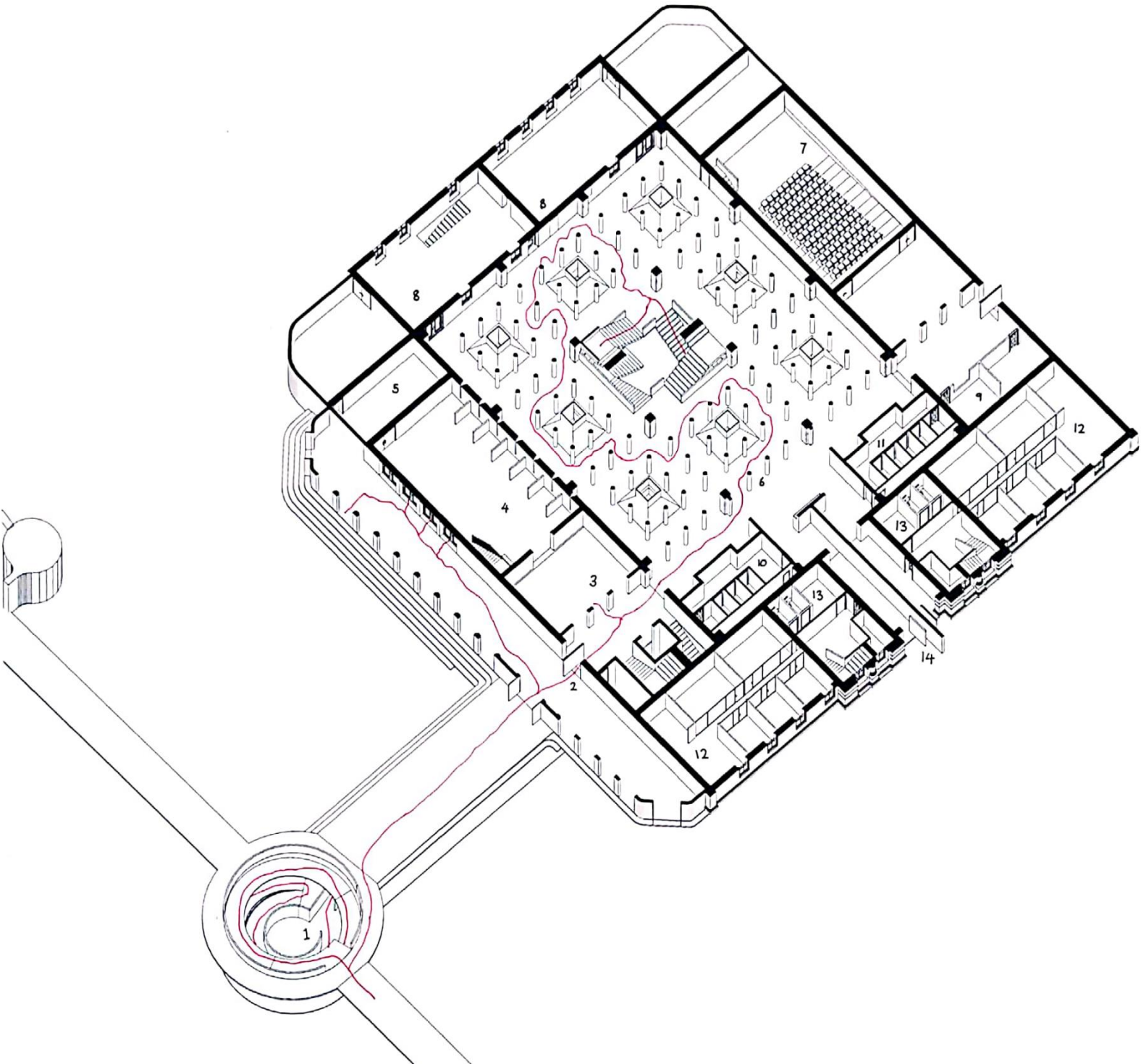


Figure 58. The "Midgard" the earthly plane. (Author 2022)

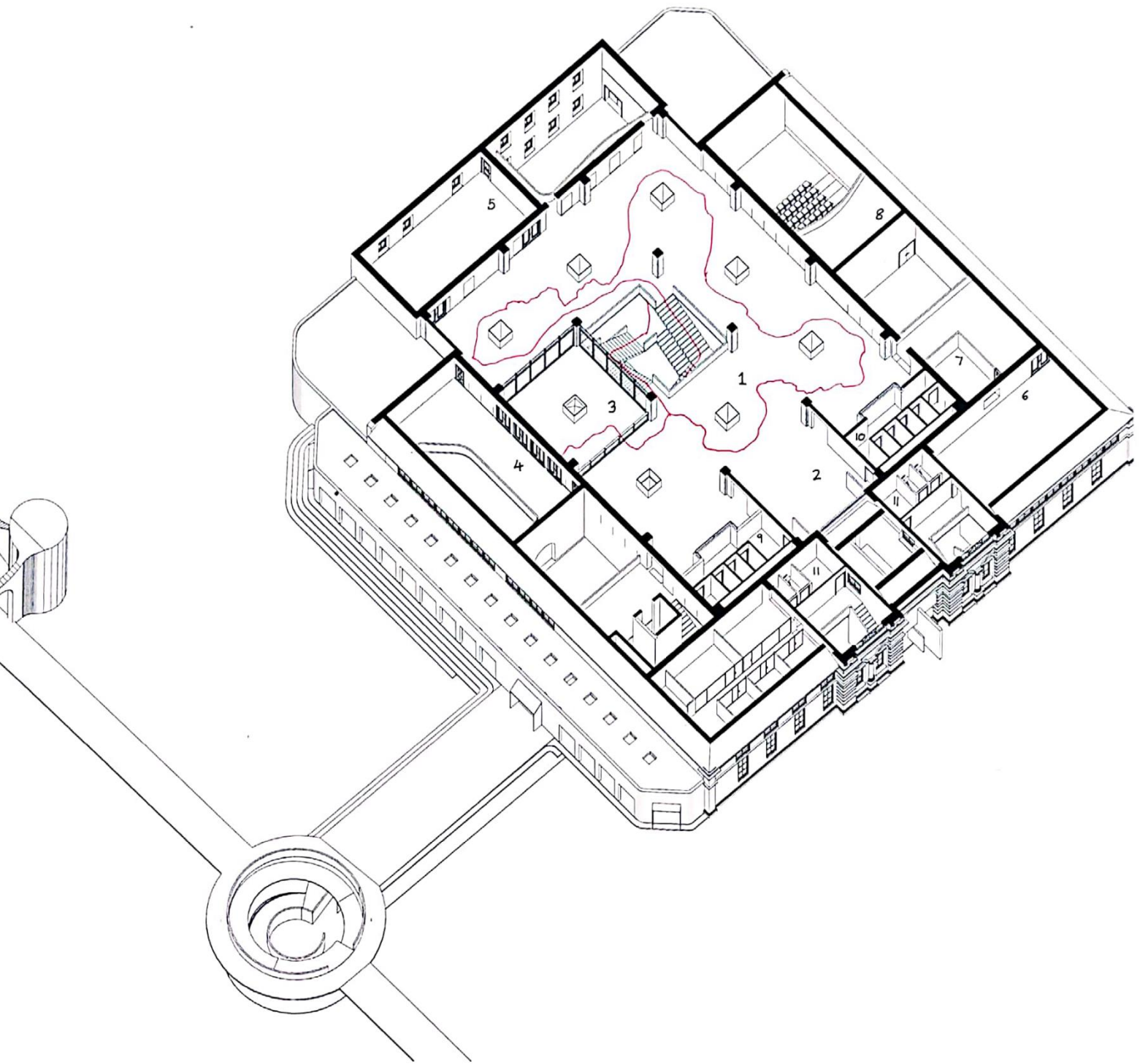


Figure 59. The “Overworld”, the higher planes of abstract thought (Author 2022)

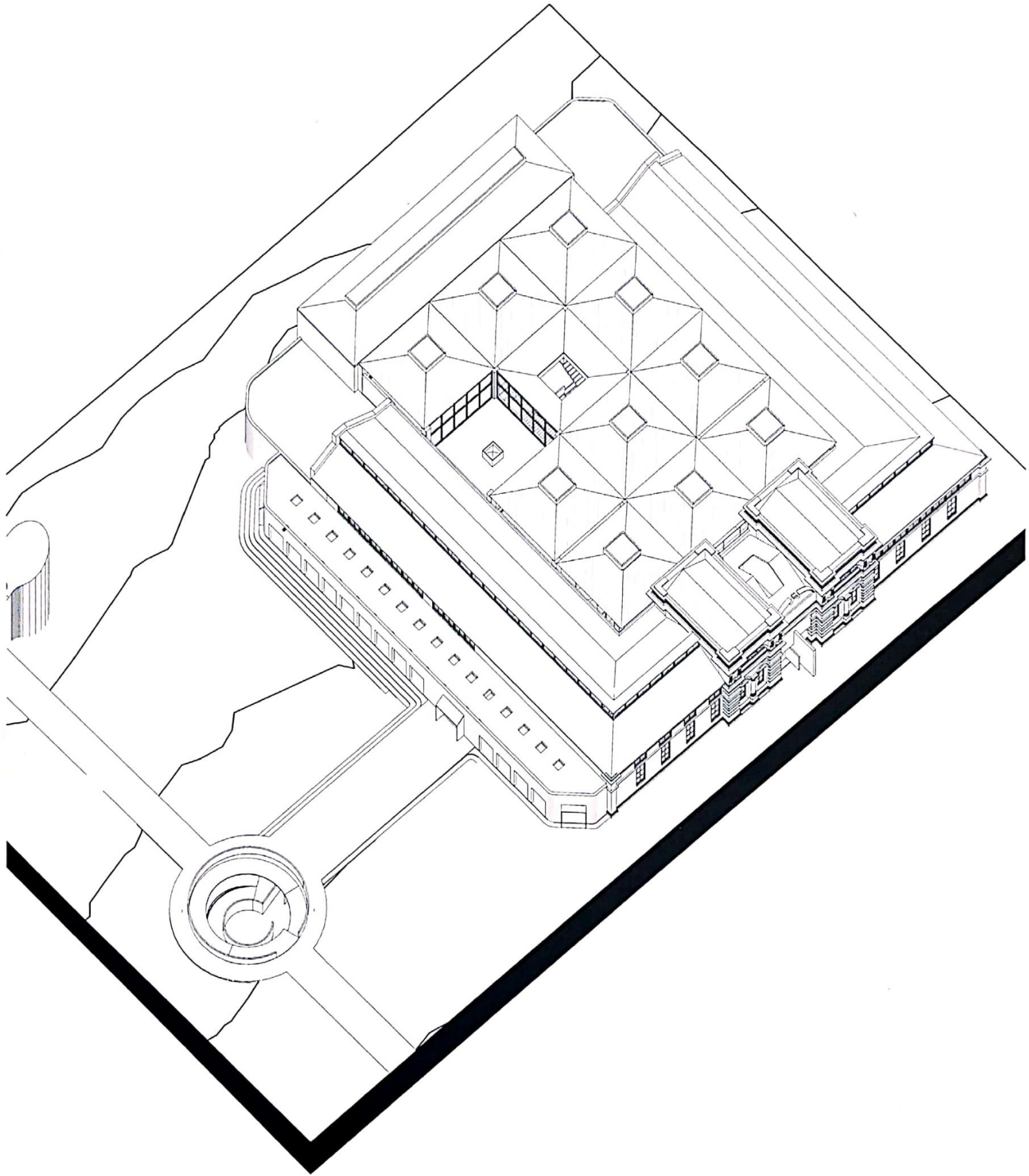


Figure 60. Roof forms recall the heavenly mountains and internal caves (Author 2022)

## CONCLUSION

To initiate the intentions of the project, a thorough investigation of the site and its architectural history, programming, and mythological themes led to the generation of ideas and forms, culminating in the museum's organisation of the three realms, in which the program corresponds. The resultant scheme, however, did not adequately satisfy the criteria of the primary issues, especially the urban issue. The design proved to be introverted and rigid, in its lack of presenting opportunity and scope for activity. This was particularly pronounced in the main exhibition areas (the *Underworld*, and the *Midgard*, and *Overworld*). Such spaces would read as opaque or confusing to navigated and occupy. This critique will revise the design and be further iterated in the following part, but be informed the same criteria as created in this part. In the next part, it will cover the crystallisation or synthesis of ideas and concepts, the iterative process and final resolution. This would then transition into the “making” philosophy of architecture, such as technification, structure, construction methods, material choices, and responses to climate control.

## **PART 3: SYNTHESIS**

## INTRODUCTION

The exploration of design based on informants (generated from three central issues, site spatial issues, relevant precedent, and conceptual ideas of universal mythic cosmogony, and the *mandala*, the central concept of *transporting the visitor* from the mundane, earthly realm to a different reality by means of the immersing the senses in route traversing the Old Museum ruin. This third part of the dissertation discusses the consolidation of design ideas and its technification, in an iterative process of layering and building over the previous. Critiques and revisions of the spatial development in the previous chapters led to a new design iteration, driven by an increased focus on responding to the urban context. The technical concept is consequently derived from this same response, creating a wraparound structure acting as a transition space from exterior to interior, balancing tectonics and stereometrics. Furthermore, a structural of both new and existing interventions is generated from the geometry of the existing courtyard, and material concept guided by the three realms of mythology. To reduce the building's energy footprint as part of the City of Tshwane's collective effort to become carbon neutral by 2050<sup>3</sup>, there will be a brief investigation into sustainable building systems, involving building comfort by means of natural light during daylight hours, rainwater collection for building use, and using analytical assessment tools (SBAT).

## 9. SPATIAL DEVELOPMENT II

This new iteration reconsiders the urban condition of the zoo and the surrounding immediate public zones. The theme of the *mandala* concept is maintained to create a transition from the urban exterior to the interior of the museum.

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<sup>3</sup> <https://www.tshwane.gov.za/Lists/CurrentNewsHome/CustomDispForm.aspx?ID=526>

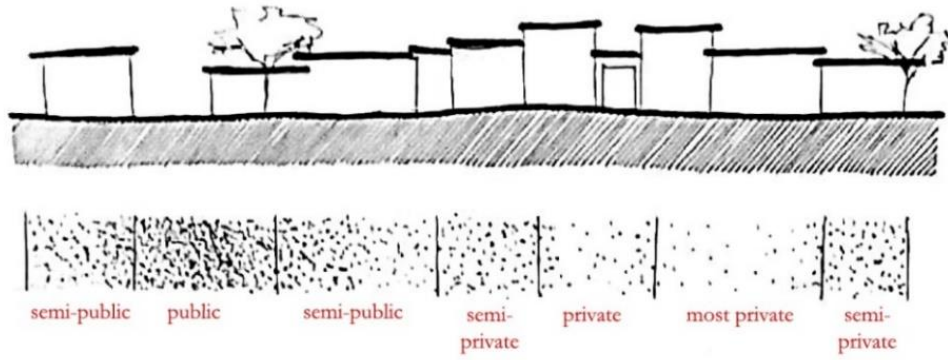


Figure 61. Transitions from public to private (Author 2022)

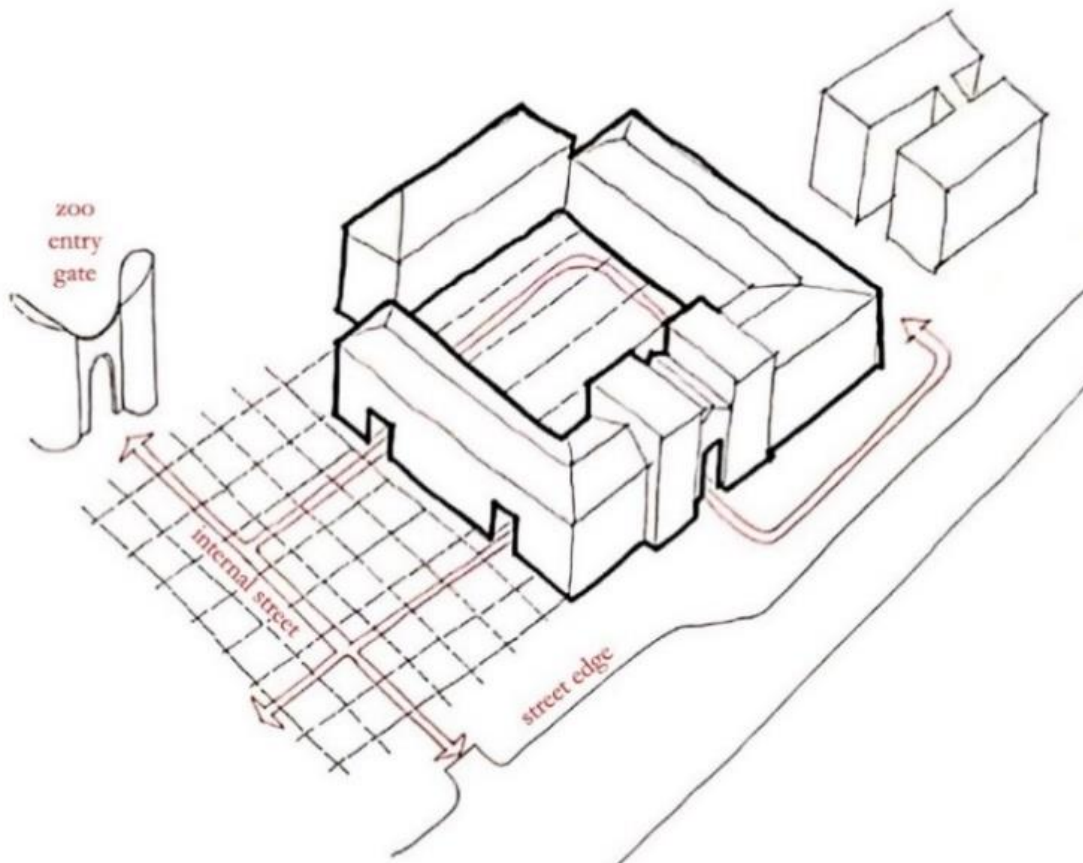


Figure 62. Addressing the public spatial flow (Author 2022)

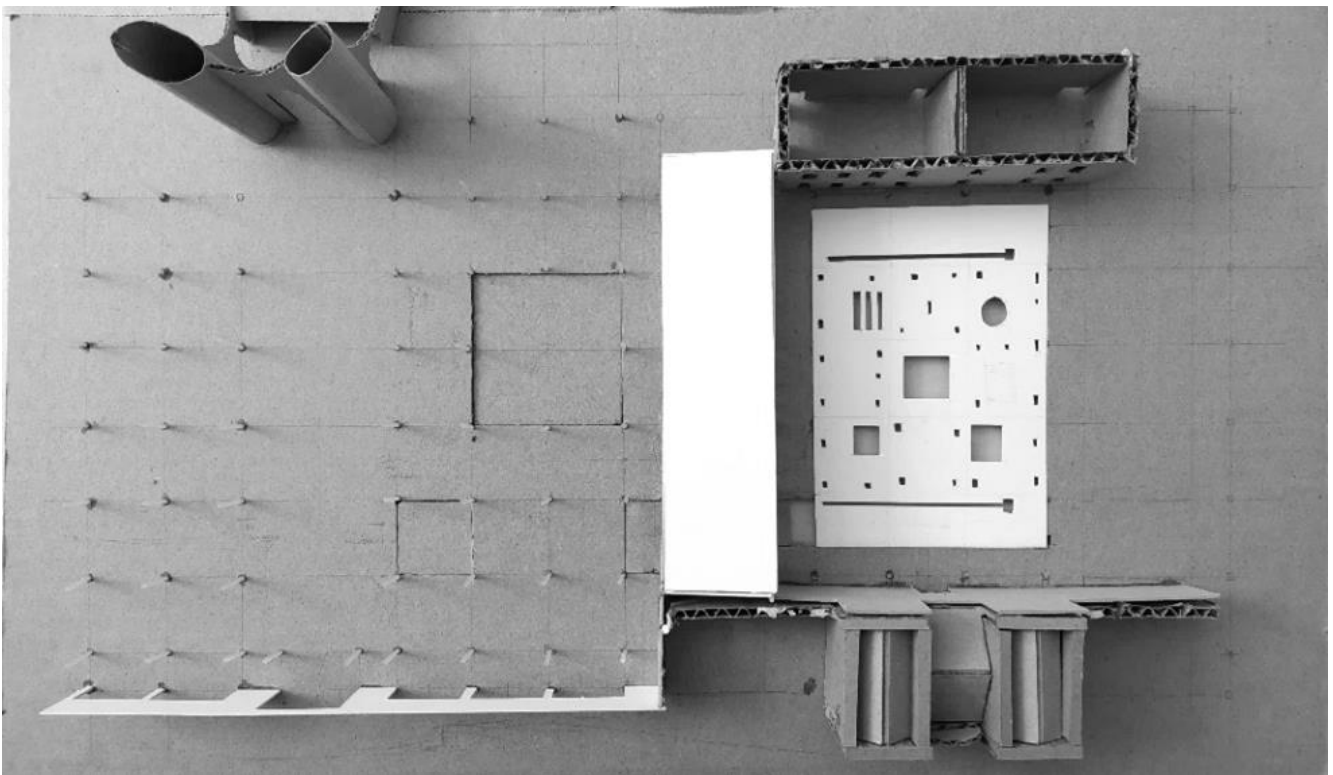


Figure 63 Second iteration maquette (Author 2022)

## PROGRAM II

A revised program involves integrating external users and site activities into the museum square, making it socially rich and active for both the zoo and museum. This creates spaces for existing on-site traders and vendors, and a marketplace surrounding a public square with seating edges, and nearby the museum restaurant.

The **museum exhibition** has been reconsidered as well. The underlying theme of the three realms, *the Underworld, the Midgard, the Overworld*, are still expressed throughout. The route one takes underground, however, is more nuanced and varied than previous. This underground space forms the core function of the museum, as the “exhibition” space. Here, spaces are arranged around the same nine senses, in the form of a 9x9 grid, organized as a maze-like structure of walls and skylights, in reference to the primordial caves and Labyrinth of the Minotaur of Knossos. The nine senses, as discussed in part two, are experienced through disruptions in atmospheric conditions and material, such as light, heat and air. The tangible aspects of “mythic” cosmogony is communicated as artworks made by in-house artists in the workshop, in opposition to decontextualizing historical artefacts on display. These artworks gain inspiration from the primordial forms of mythology, as shown earlier in Part 2. Furthermore, these particular artworks are tactile objects, to be touched and felt by the visitors. This is justified as a subversion to normative museum exhibitions that prohibit touch.

The artists’ **workshop** for local artists is where “artefacts” pertaining to the mythic cosmogony, (*the cosmic propping of the sky, the world tree, the egg*) are crafted and stored. This is located in the block as the previous workshop in the Old Museum.

The **restaurant** provides an extension of the haptic experience of the museum. It continues the themes of the elements, and conveyed in to food served and materials to be felt in each space.

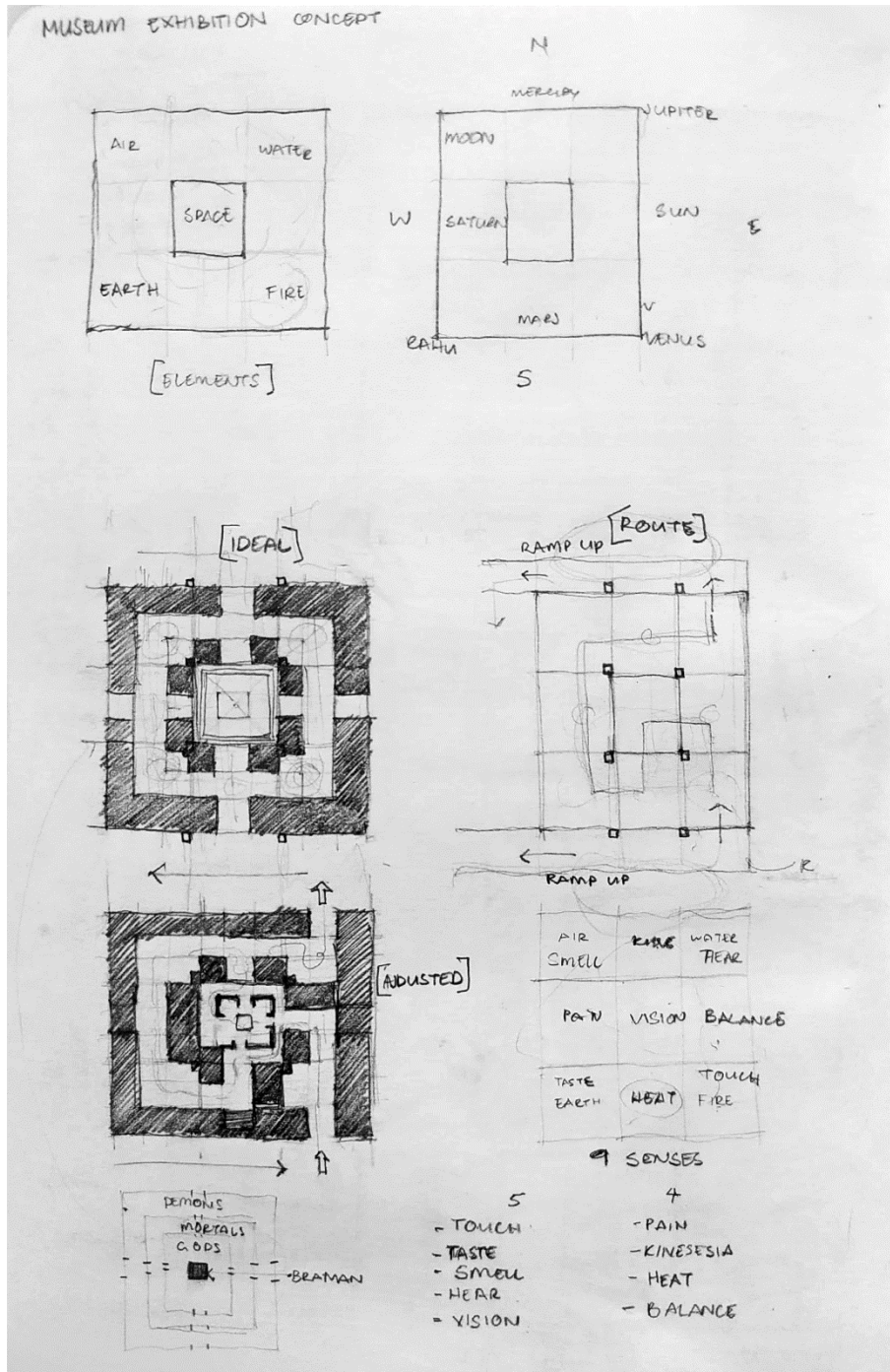


Figure 64. "Atmospheric" exhibition planning conceptual ideas (Author 2022)

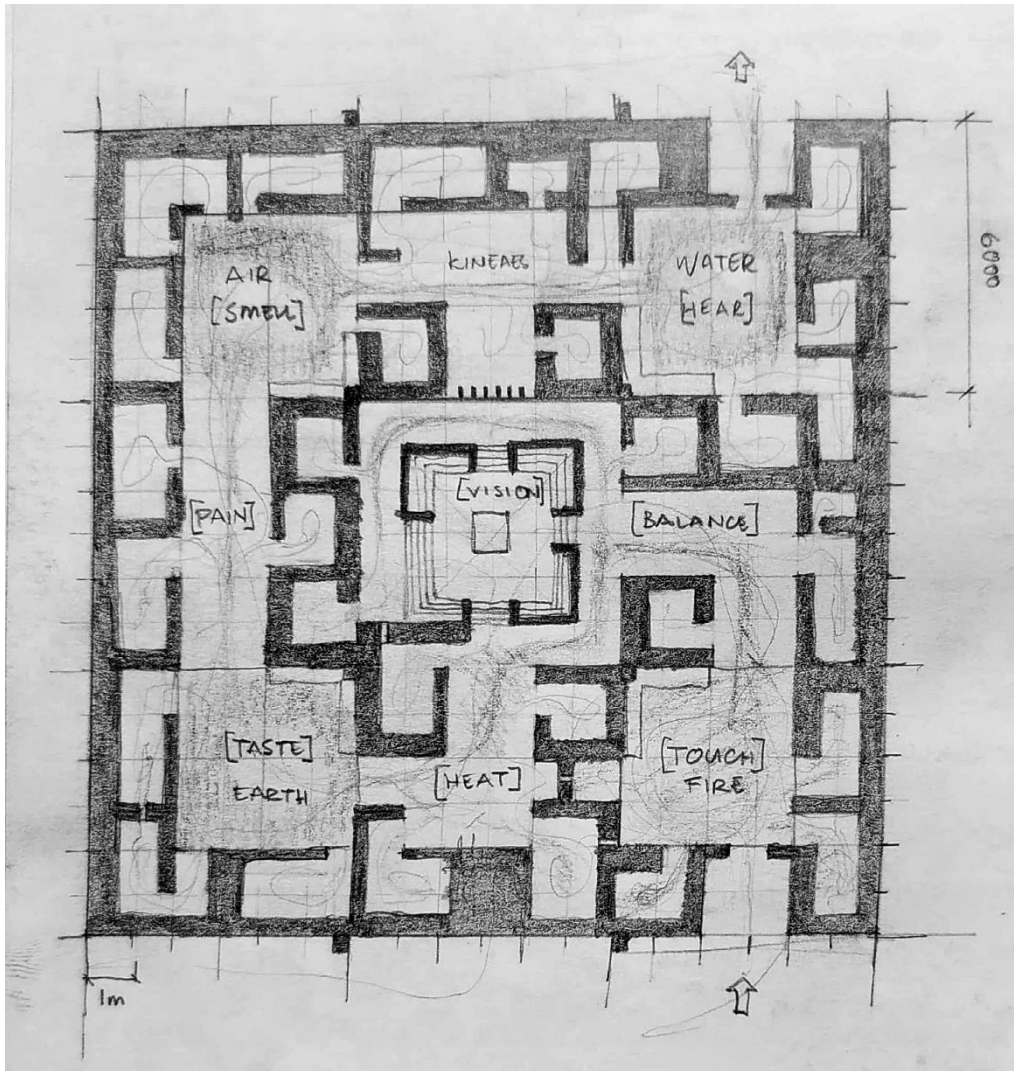


Figure 65. Exhibition sketch plan (Author 2022)

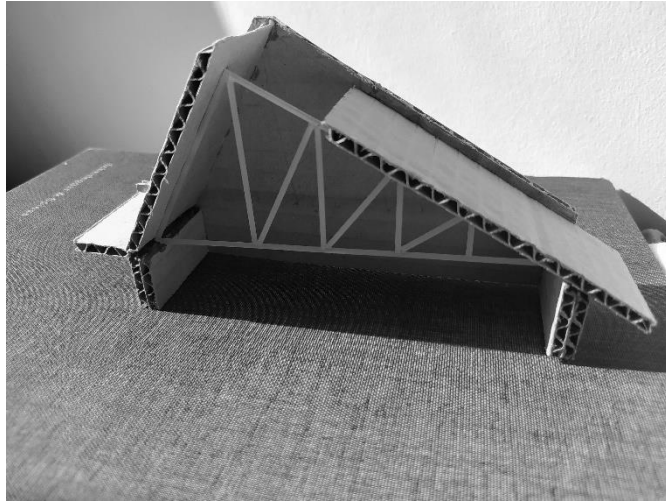


Figure 66. Maquette of the structure of the workshop roof (Author 2022)

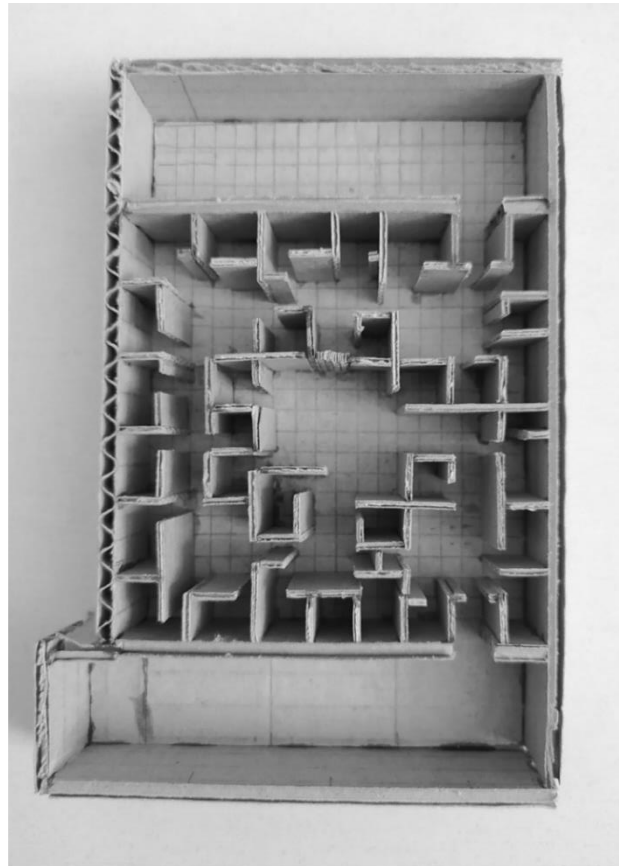


Figure 67. Exhibition plan maquette (Author 2022)



Figure 68. Second iteration redesign model (Author 2022)

### **PRECEDENT III: CONTEXT & FORM**

#### **Charles Correa**

To address the urban condition sufficiently and to avoid the proposed museum becoming an isolated space in the city, a suitable precedent was researched accordingly which responds to the same conditions. Charles Correa designed several museums in India during the Late Modern to Post-Modern periods, and placed increased emphasis on public intercourse, climatic responses and design frameworks that were subversive to Western canonical ideas. Whereas European Modernist architecture made sharp distinctions between inside and outside, non-European space, such as vernacular Indian or African architecture, emphasized a continuum of zones between closed and open space, and boundaries made informal and ambiguous (Khan 1987:11).

#### **Design Principles**

In brief overview of his design principles (demonstrated in his museums), he makes use of a grided system comprised in modules, connected with interior courtyards and changes in levels, which add spatial richness. Overhead planes are arranged as large overhanging flat roofs, providing shade from the harsh sun but also creating deep recesses of light and shade. These also respond to the tropical climate of India, buffeted by heavy monsoons, and intense sunlight. These courtyards and overhangs provide ventilation and cool shade respectively. Combining these strategies together, his architecture is described a “puzzle box” or maze to be solved by the visitor. Furthermore, these design tactics recall historical or mythic spatial themes: his grid system recalls the 3x3 mandala of ancient Indian temples, stepped open-to-sky spaces recall stepwells, and movement through the building recalls pedestrian paths in temple complexes between shrines and gates (Khan 1987:104).

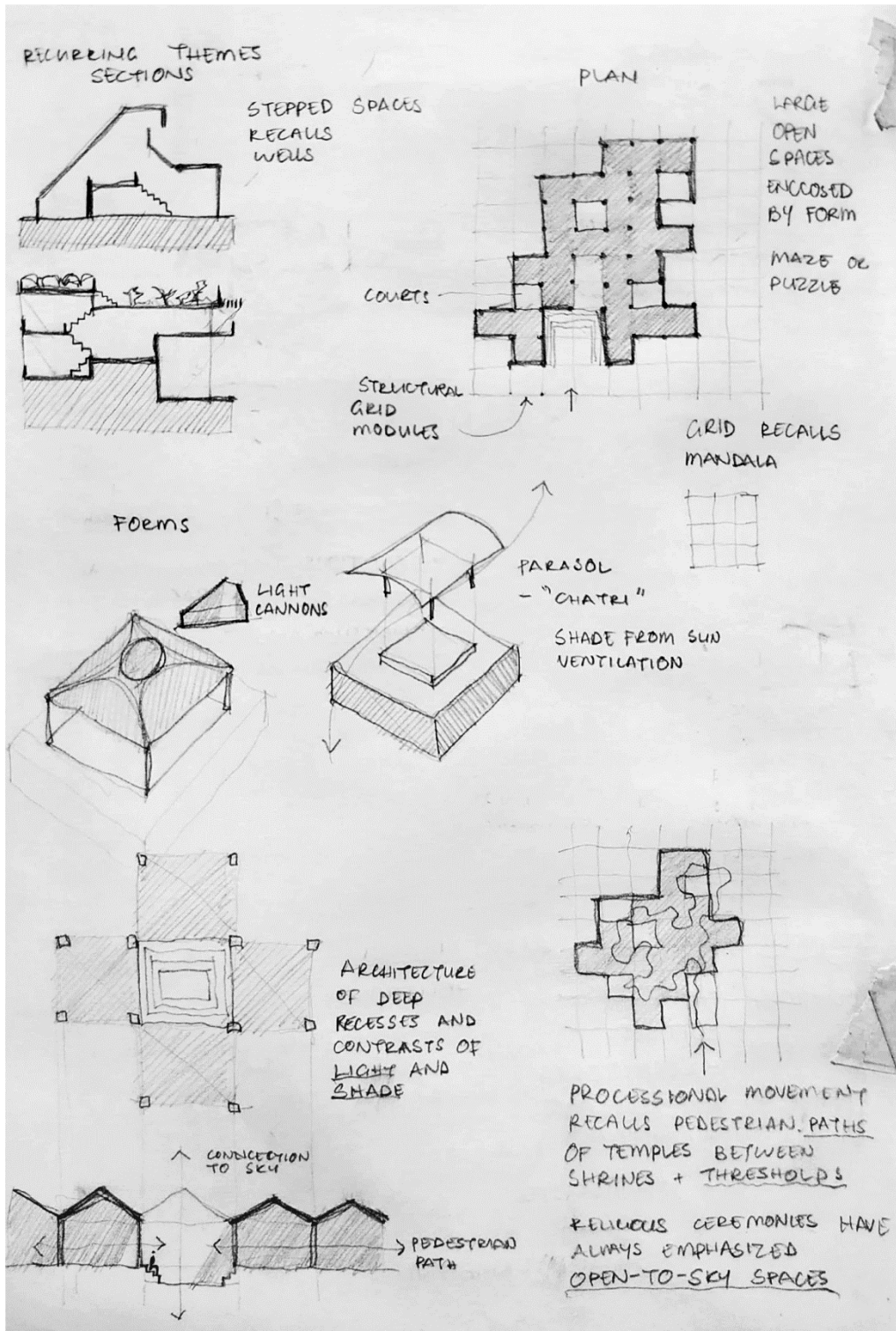


Figure 69. Analysis of Charles Correa design principles (Author 2022)

## Bharat Bhavan in Bhopal (1975-81)

This museum arts centre manifests all of Correa's design principles. Using the natural contours of the site, sunken courtyards and garden terraces organised loosely in modules on a grid define the museum design. The progression of space from entrance to the main interior, are gradually revealed like a puzzle. A prominent feature of the roof design is a "light cannon" to orchestrate light in the exhibition space. This recalls a similar design language from Le Corbusier, in the Firminy-Vert church and La Tourette monastery. The deep shadowed recesses, steps for sitting outdoors, and terraced planting make this museum pedestrian friendly and comfortable yet balanced with the poetry of mystery and sense of exploration.

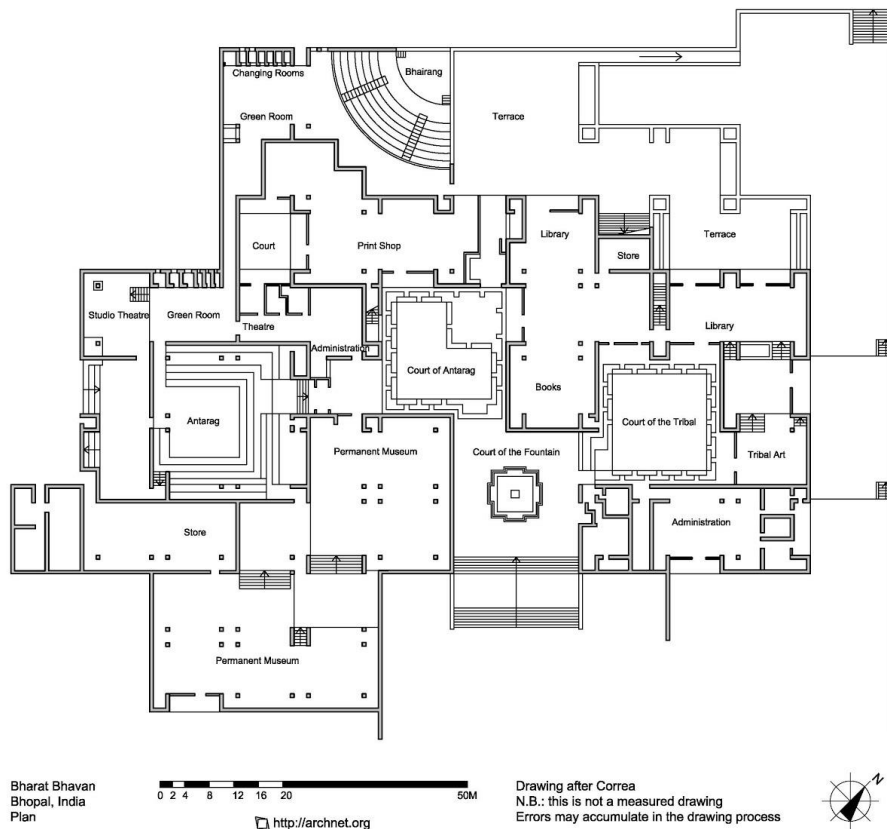


Figure 70. Plan of Bharat Bhavan Museum (Khan 1987)

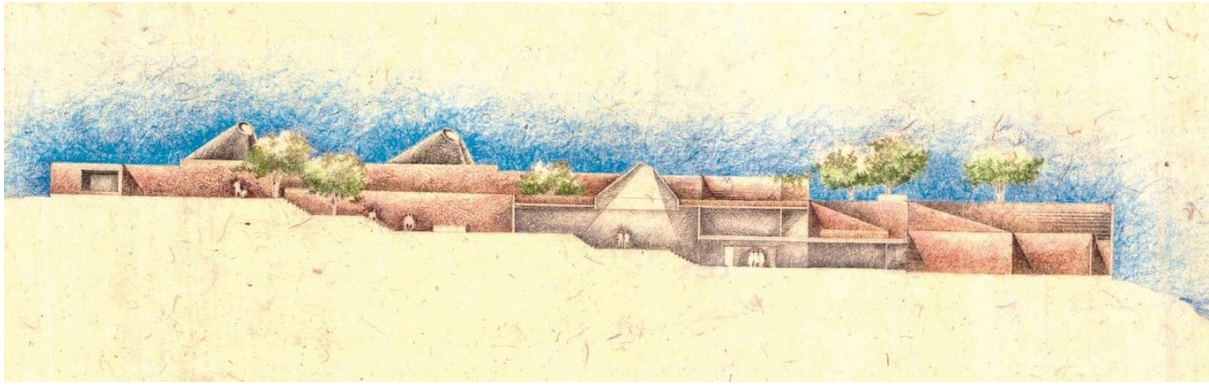


Figure 71. Section through the museum (Khan 1987)

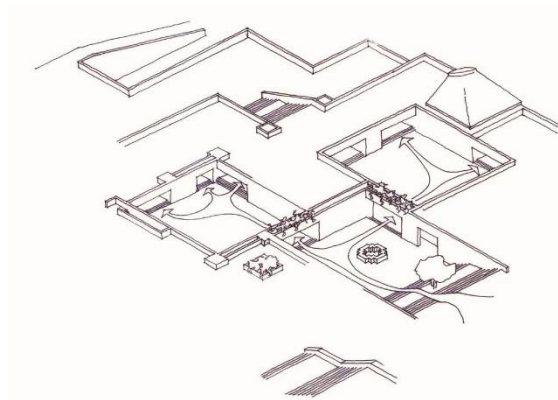


Figure 72. Isometric drawing of the terraces and steps (Khan 1987)

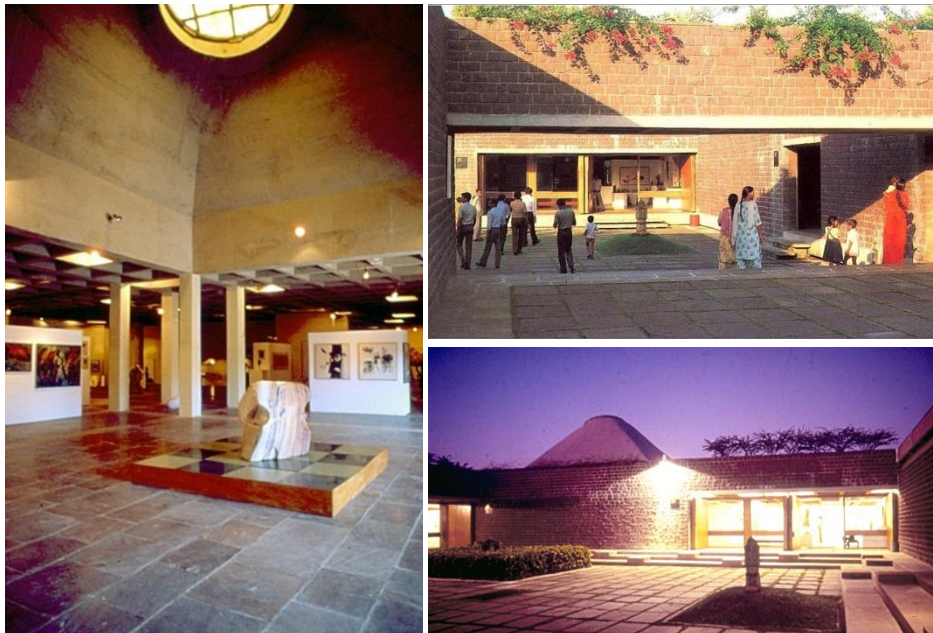


Figure 73. Main exhibition spaces (left) and exterior (right) (Khan 1987)

## SYNTHESIS

In the following pages, the final design is resolved, working from the previous design principles and layout, but adapted to respond to the context of the zoo entrance, creating an internal thoroughfare and ambiguous spaces between inside and outside for public and urban life.

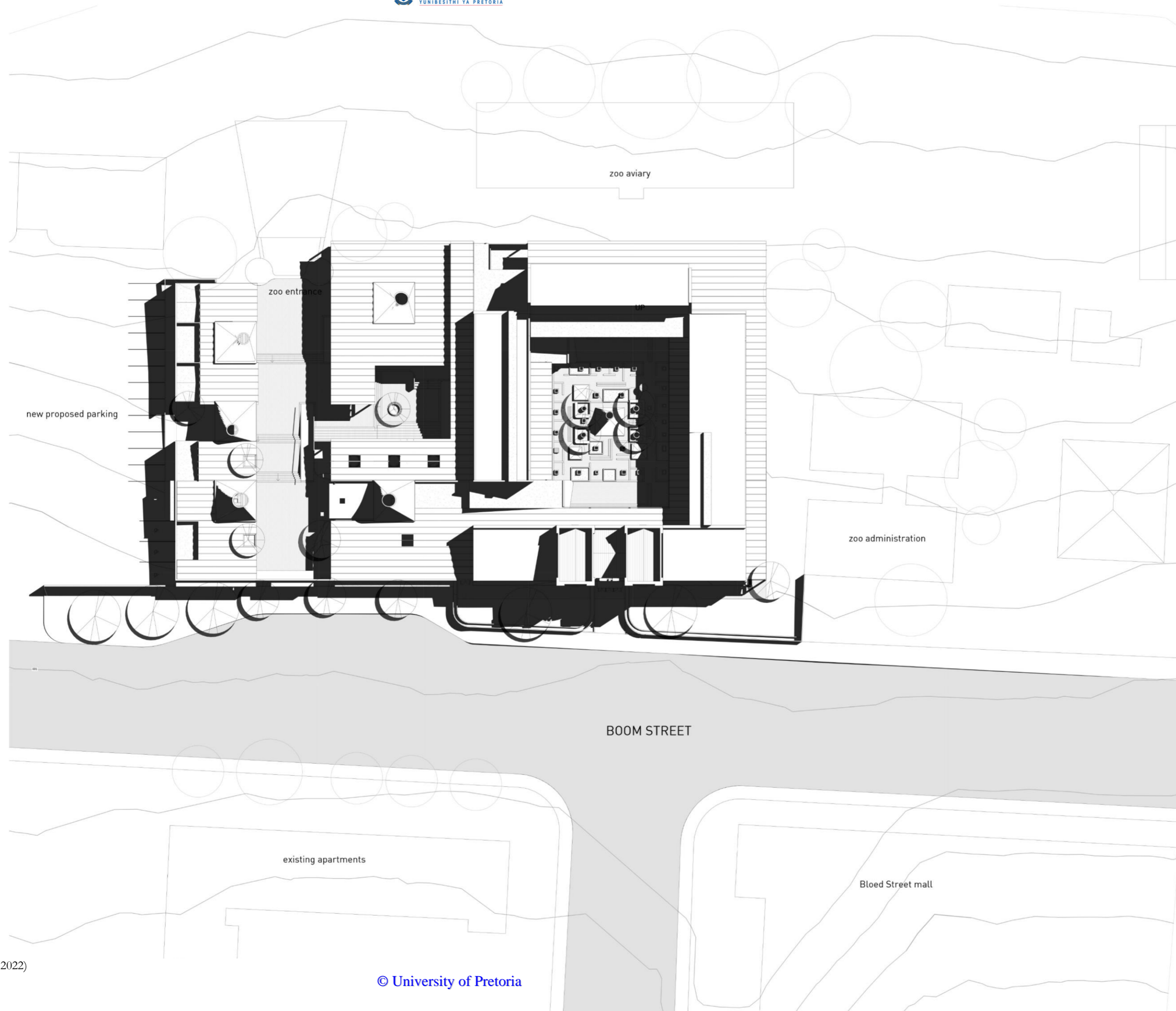


Figure 74. Site Plan (Author 2022)

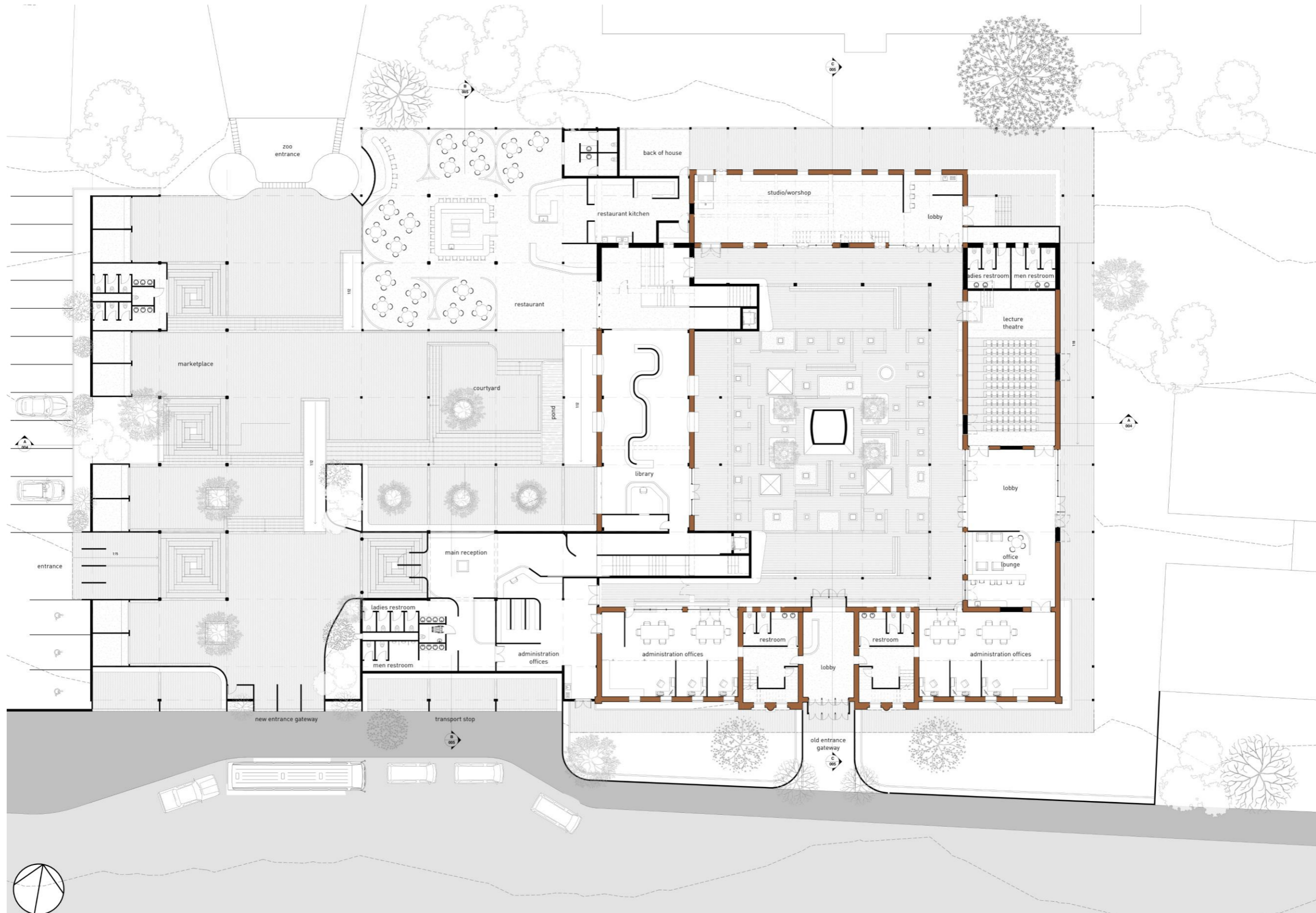
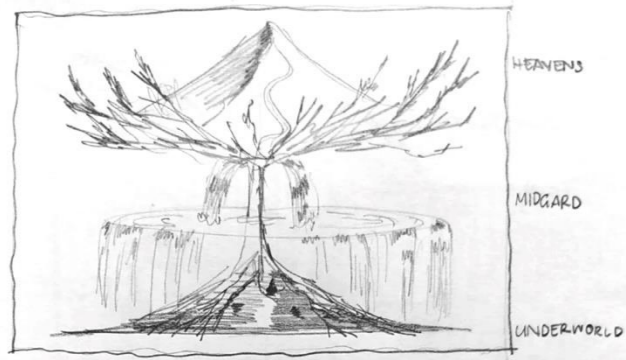


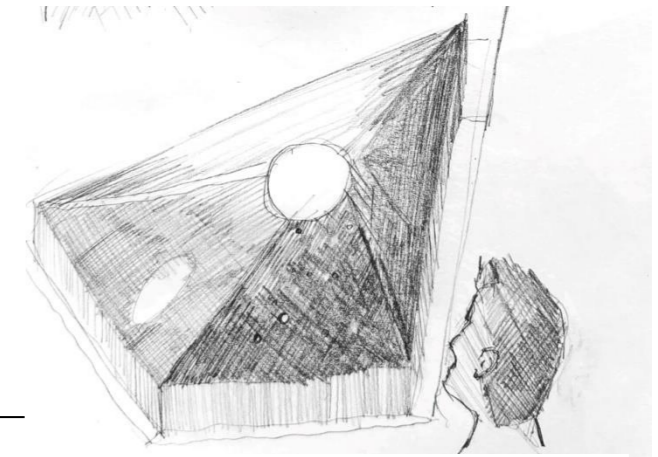
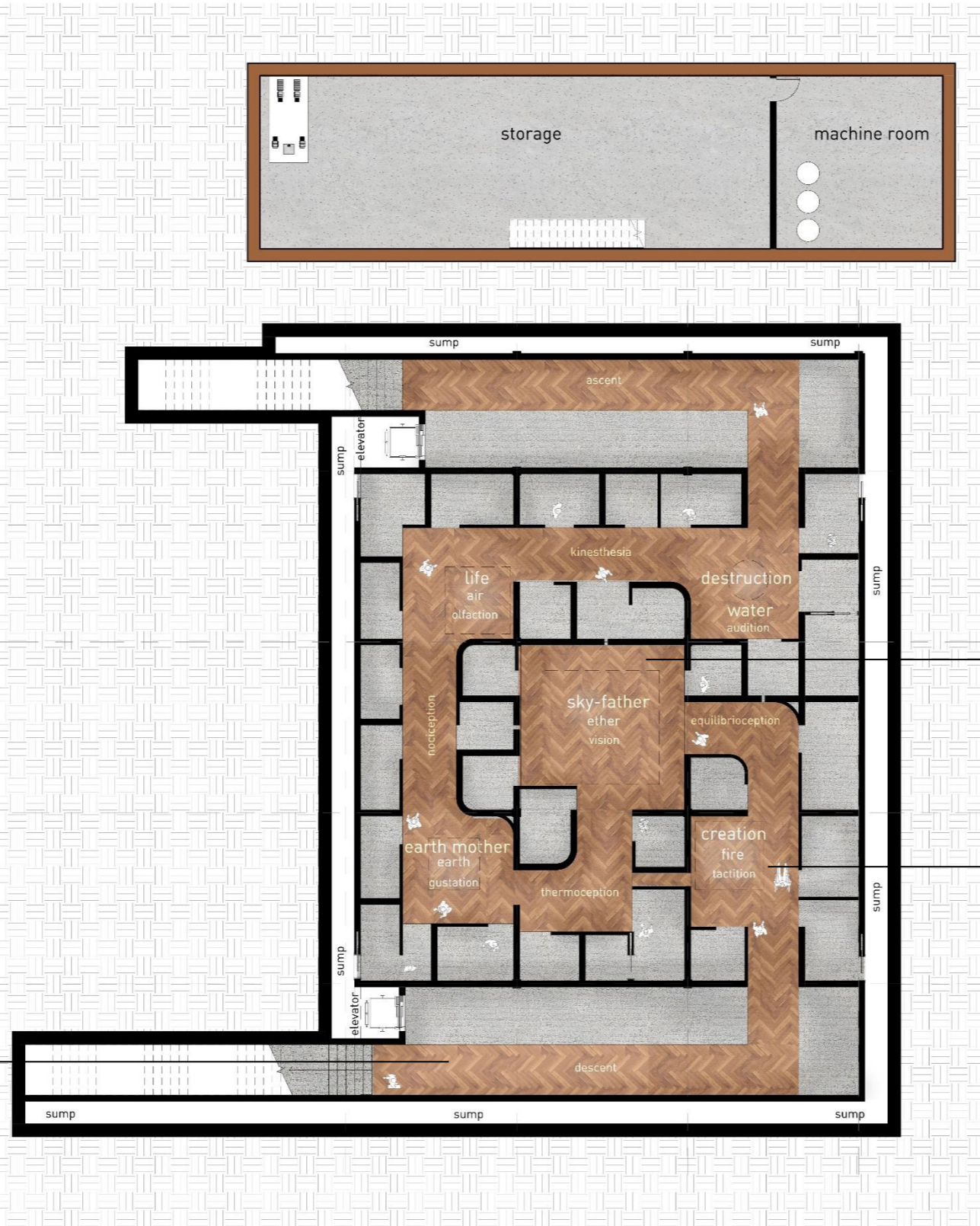
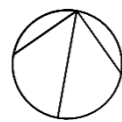
Figure 75. Ground plan (Author 2022)



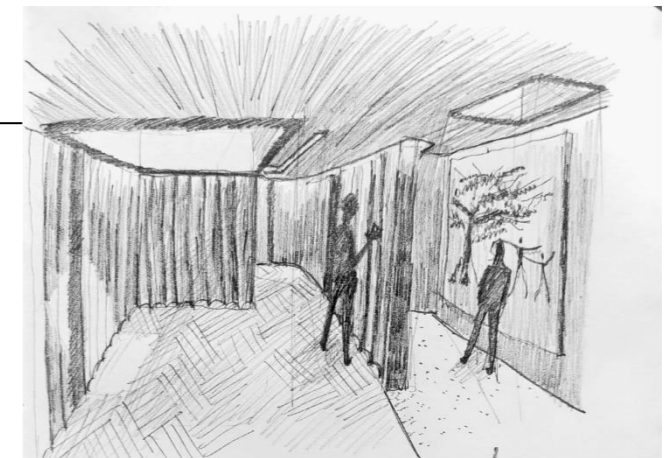
Relief mural of the three mythic realms



Descent into the darkness, and the Creation Mural



The Axis Mundi



The Fire Chamber

Figure 76. Lower ground plan ("atmospheric exhibition") (Author 2022)

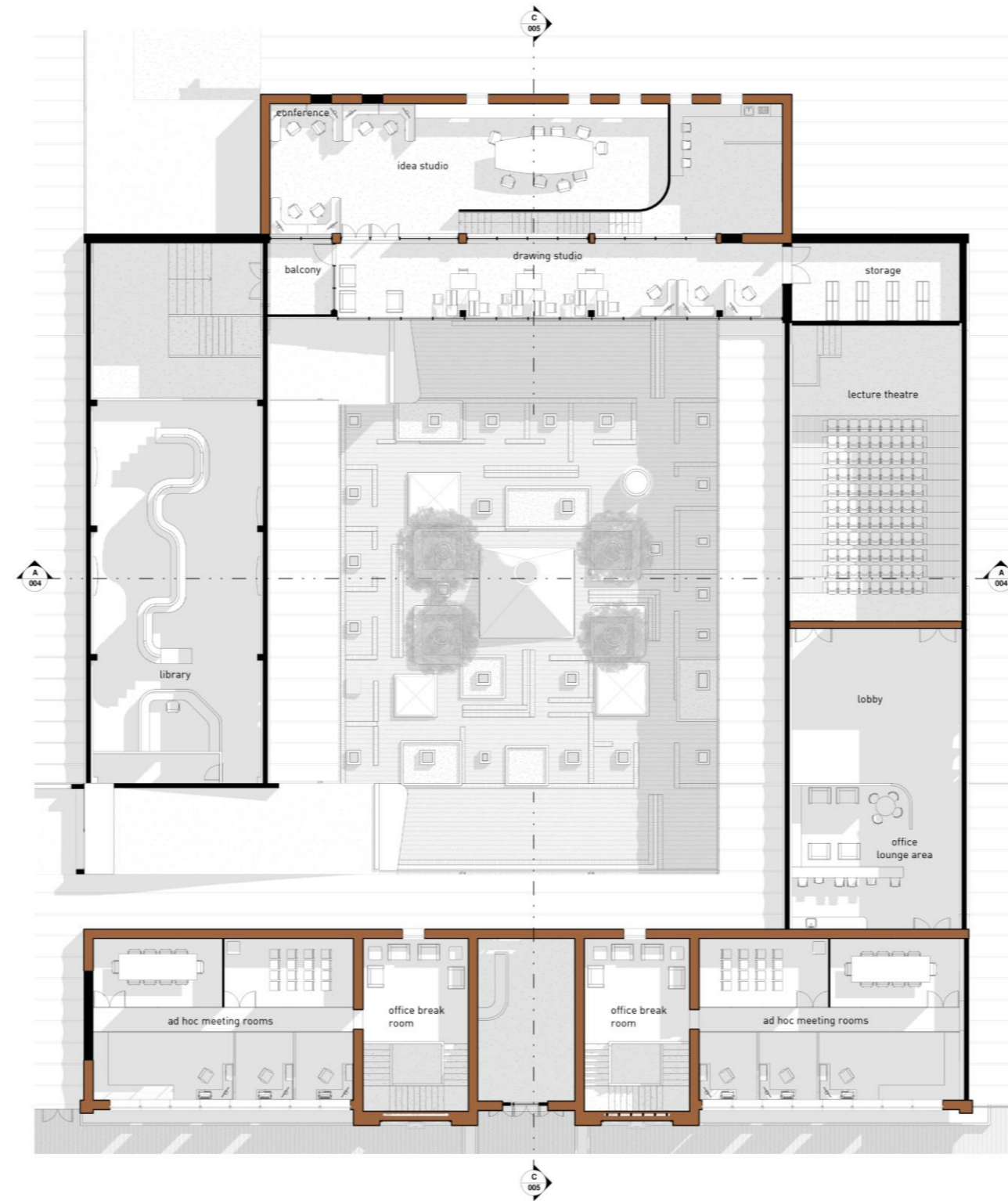


Figure 77. Upper ground plan (Author 2022)



Figure 78. South Elevation (Author 2022)

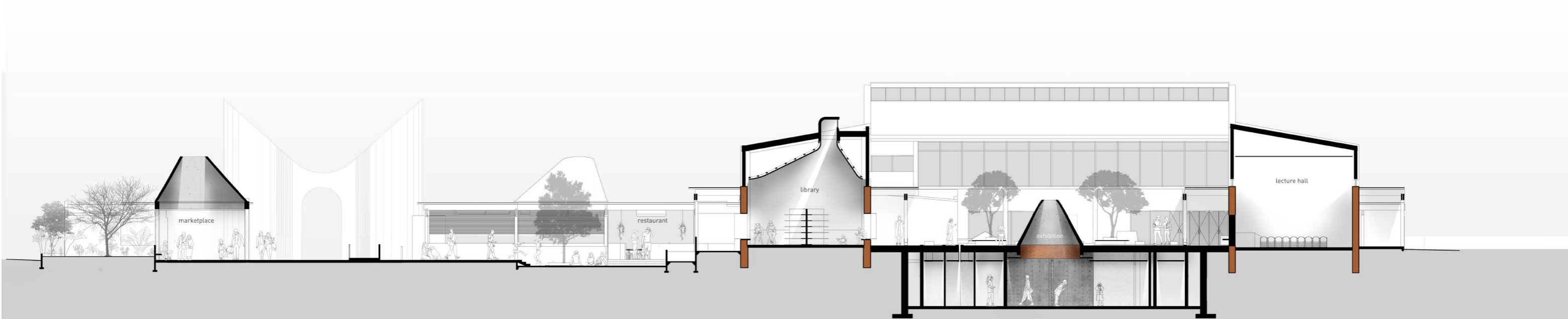


Figure 79. Section A-A (Author 2022)



Figure 80 West Elevation (Author 2022)

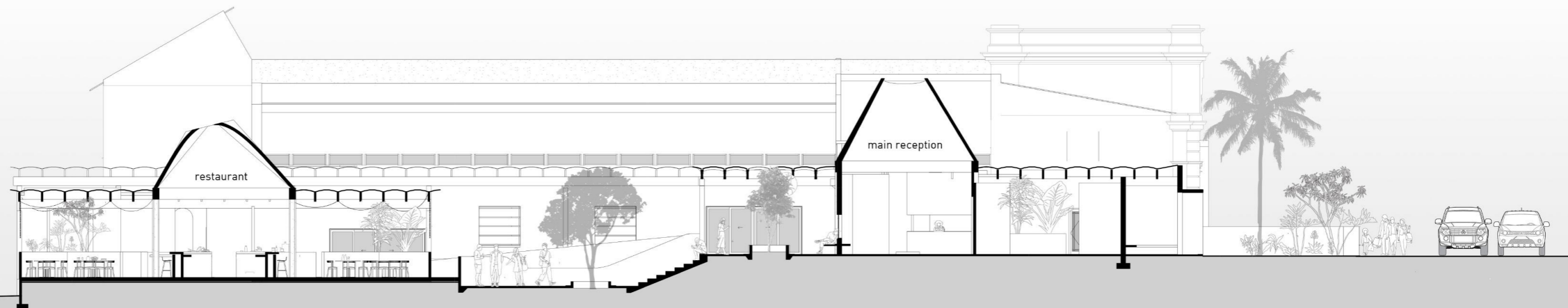


Figure 81 . Section B-B (Author 2022)

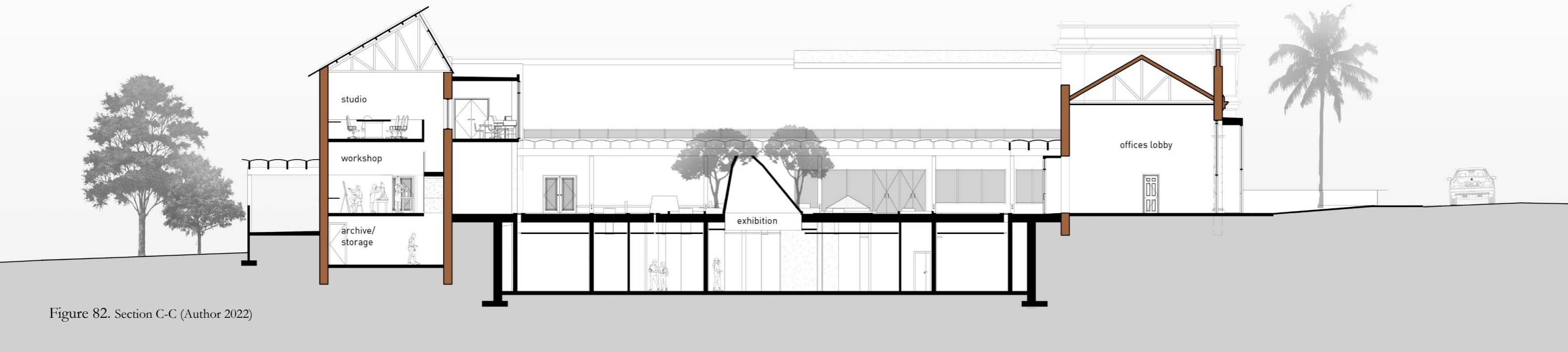


Figure 82. Section C-C (Author 2022)

## 10. TECHNIFICATION

### CONCEPT

To address the urban condition, a “porch” is wrapped around clearly defined spaces (“solids & “voids”) which form the core functions of the museum, such as the exhibition, lobby, library, restaurant, trader market and the open-to-sky courtyards. This “porch” acts as a transition space from the urban public zones such as the zoo. This porch is expressed tectonically, through a lightweight post and beam system on a structural grid, separate from skin to allow open movement under shade outside the museum proper. The solids are expressed stereotomically, derived from the existing structure. Furthermore, the decision was made to keep existing building

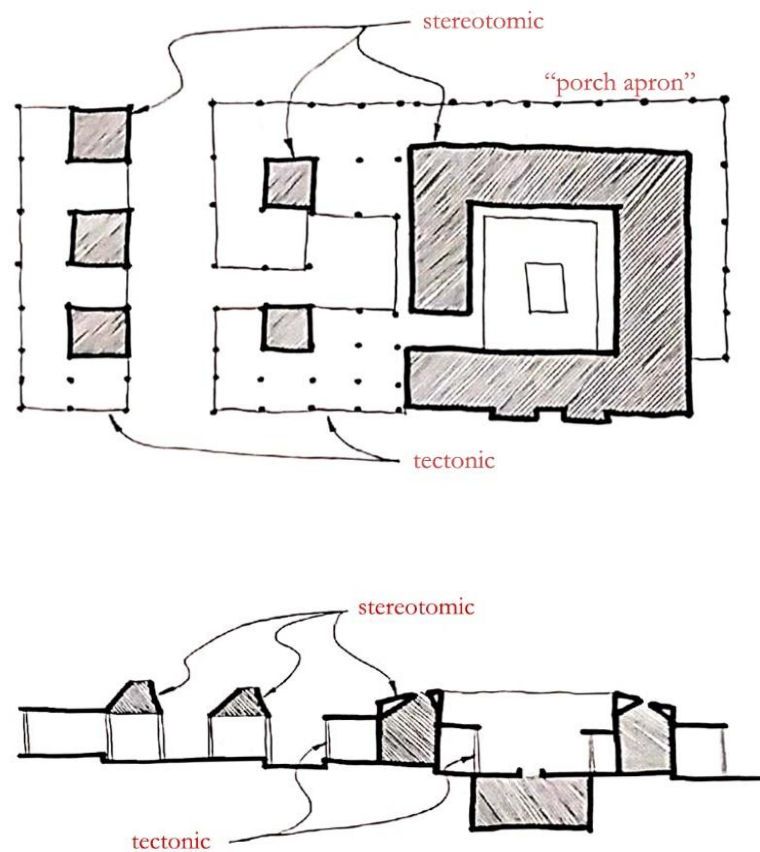


Figure 83. Technical concept, plan and section (Author 2022)

structure intact to address the heritage of the building, but with small deviations adding as a new “layer” over the previous (a palimpsest).

New roof forms address fitting in the existing urban context of the zoo admin buildings, but the interior responds to the new museum functions. This is expressed as simple, mono-pitched roofs, which are in concord with surrounding context buildings of the zoo. Moreover, it contains the vestige of the previous hip roof design of the Old Museum. However, to express important and significant portions of the museum, such as the entrance, a more formalistic approach was considered. Concrete truncated pyramids stand as sentinels over the public gateway, and over the main museum entrance. This is creating a balance over the lightness of the pavilion structure.

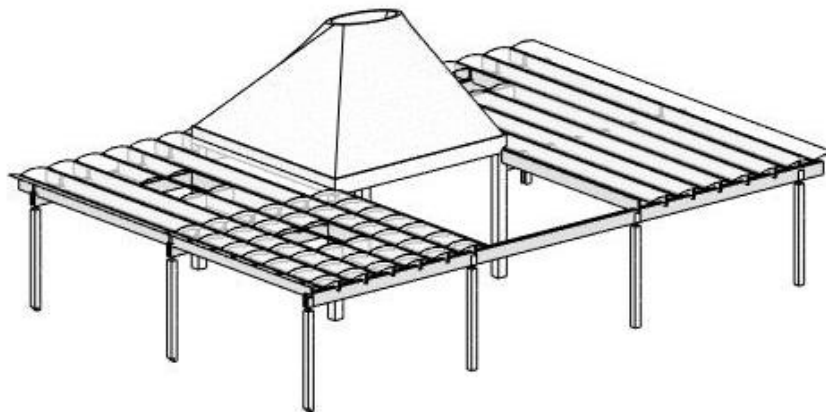


Figure 84. Lightweight, tectonic “apron”, contrasting stereotomic forms (Author 2022)

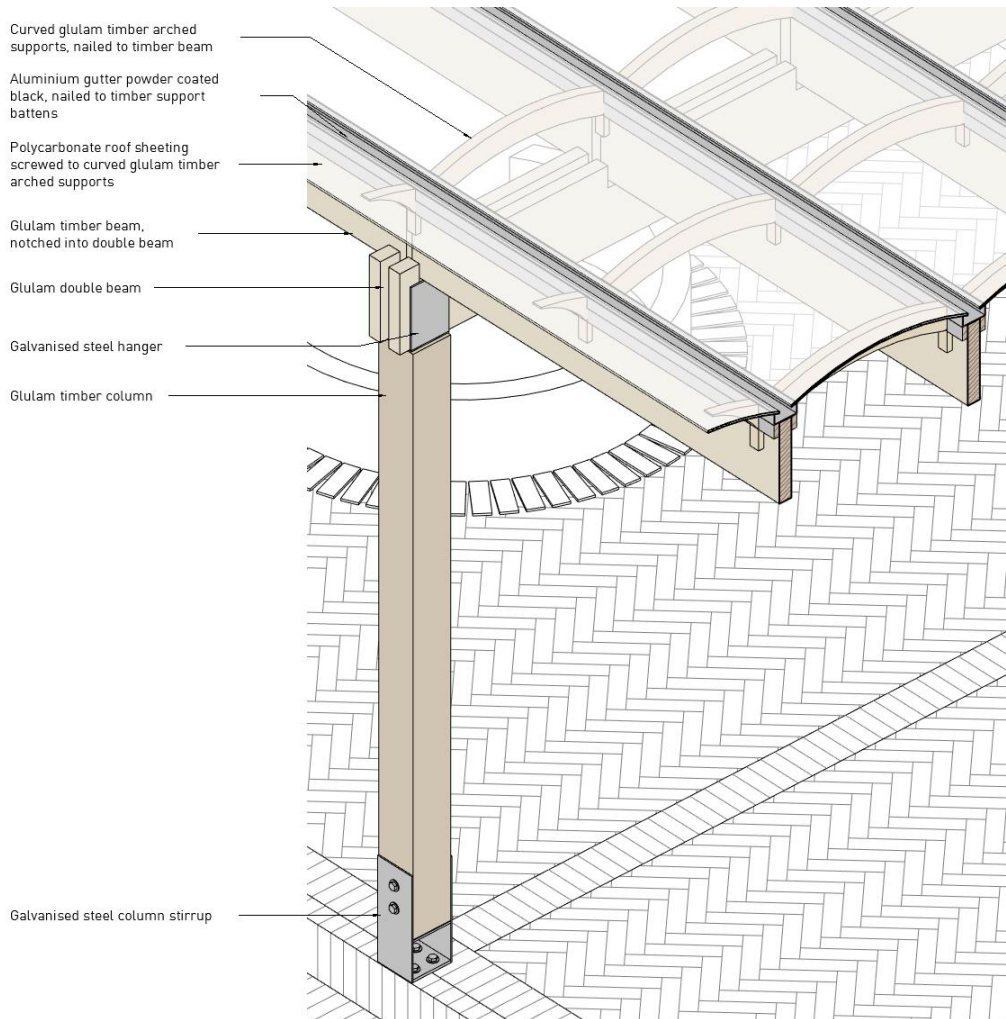


Figure 85. Concrete and timber beams support joists and timber arches under semi-translucent sheeting (Author 2022)

## STRUCTURE

A 6m x 6m structural grid is generated from the existing geometry of the Old Museum courtyard. Within this courtyard is the underground space of the main exhibition of the museum, by means of a retaining wall setback from the existing foundations, and columns supporting a concrete floor plate, punctuated with openings for light and air. This grid is extrapolated toward the public zone near the zoo entrance and articulated by the porch overhead structure. Penetrating this pavilion are concrete pyramidal structures (in one module supported by a ring beam on 4 columns) to define important spaces (the entrance, restaurant, exhibition & marketplace).

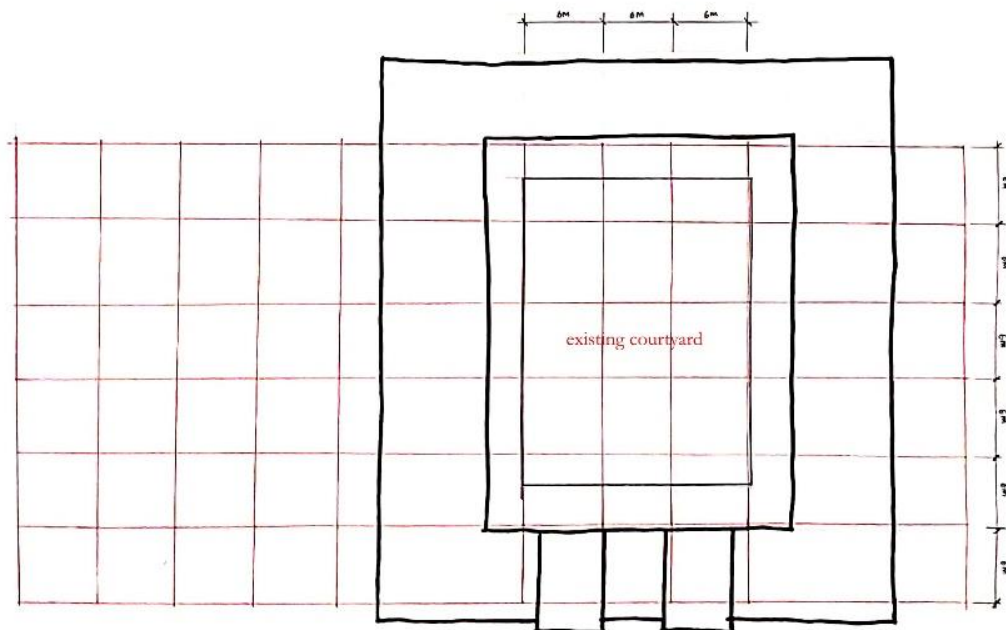


Figure 86. Structural grid 6m x 6m generated from existing courtyard geometry in the Old Museum (Author 2022)

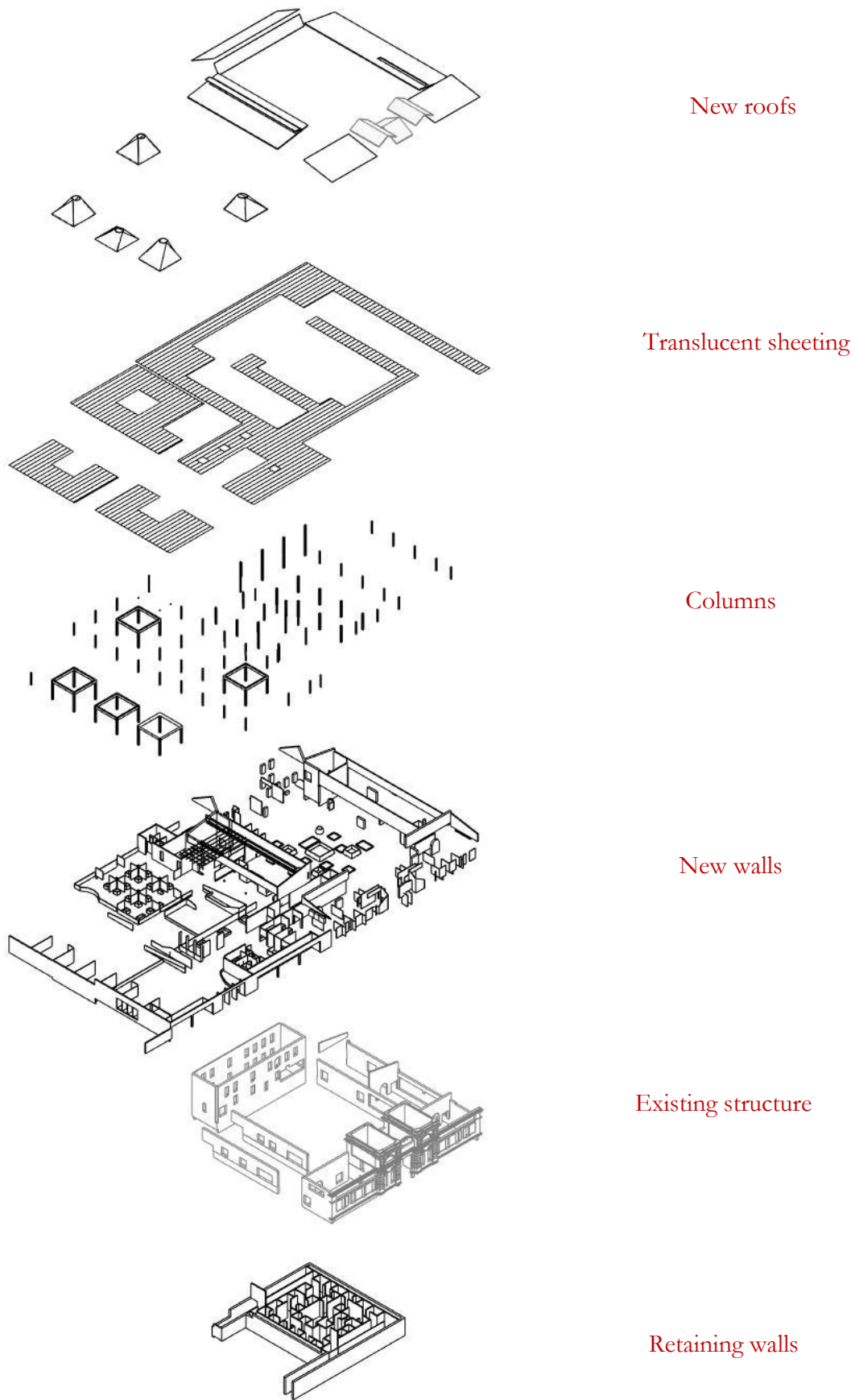


Figure 87. Exploded Axonometric of structural planes (Author 2022)

## MATERIALITY

Material choices were guided by existing contextual materials on site and allowing new materials to age gracefully. Interior materials were informed by the museum design functions and structural form: heavy stereotomic elements of the exhibition and existing are articulated by beton concrete and masonry respectively, allowing light and time to wash over these materials. External conditions involve choosing materials that blend with the sky and greenery of the zoo and “ruin”, such as timber, rammed earth walls and overhead translucent panes to diffuse sunlight and make create a softer, naturally lit environment.

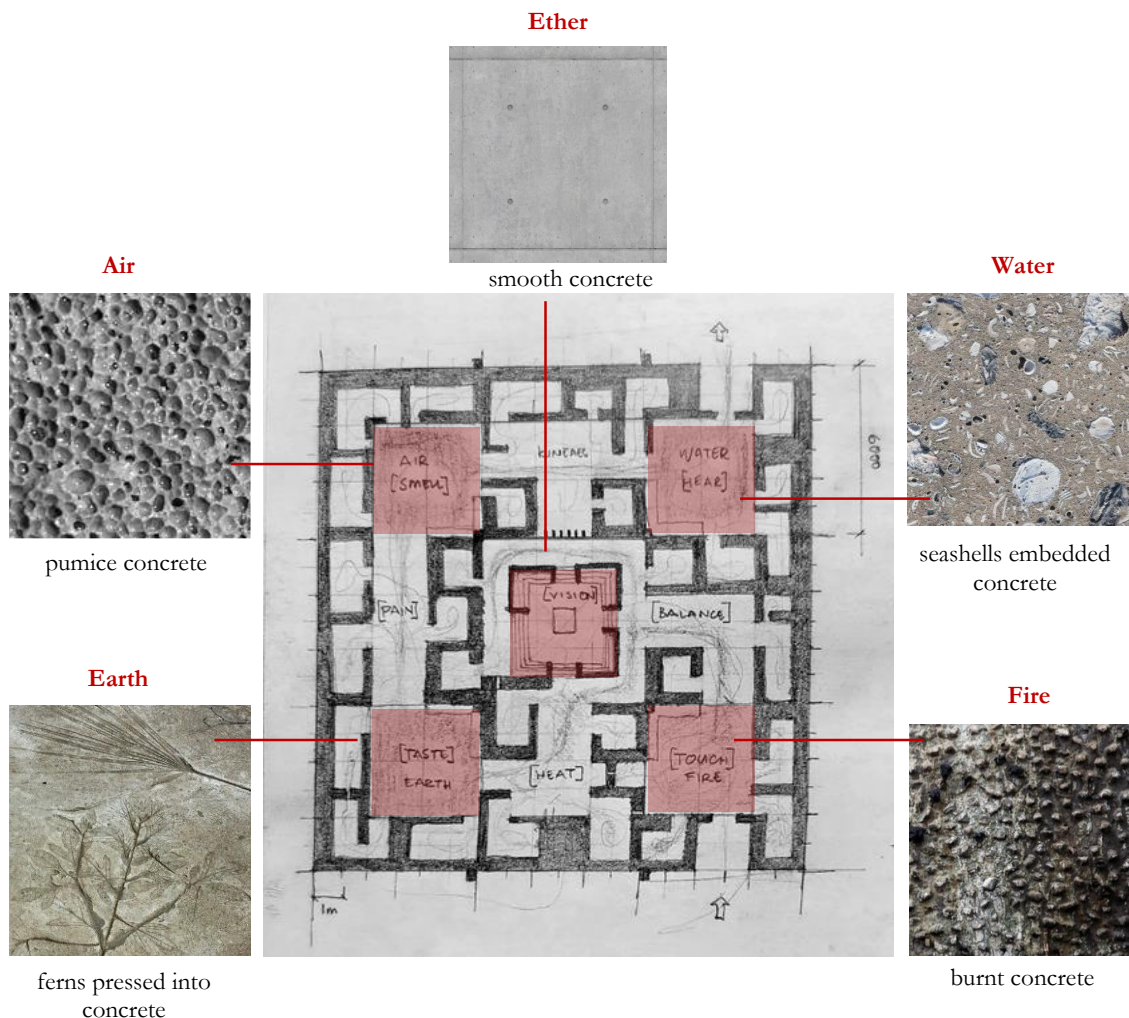
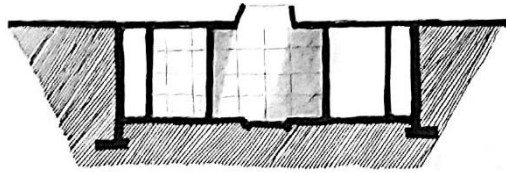


Figure 88. Material palette for the “Underworld” (Author 2022)

**Underworld** (“atmospheric exhibition”)



textured  
concrete

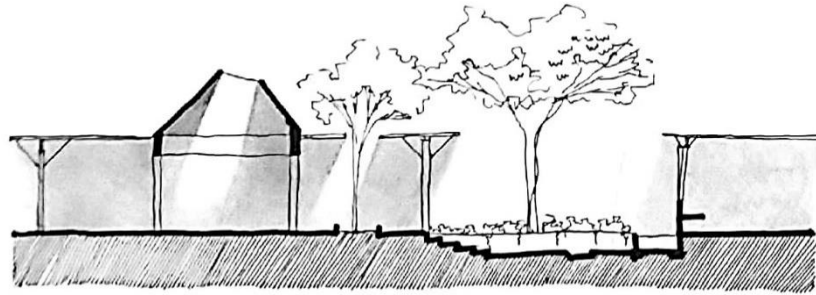


Oregon pine  
parquet



grey slate tile

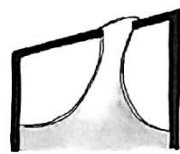
**Midgard** (restaurant, marketplace, square, offices)



rammed earth    red facebrick    herringbone brick pavers    red pigmented concrete    flagstone pavers    white bagged brick wall    blue mosaic tiles

Figure 90. Material palette for “Midgard” (Author 2022)

**Overworld** (library, workshop, lecture theatre)



maple cladding    COR-TEN

Figure 89. Material palette for “Overworld” (Author 2022)

## PRECEDENT IV: TECHNÉ

### ROOFS

- **Kimbell Art Museum expansion - Renzo Piano Building Workshop (USA, 2013)**

To accommodate the expansion of the Kimbell Art museum, Renzo Piano designed an extension that sets up a dialogue between the old and new. The roof is a particularly prominent feature of the building, consisting of a tectonic system of laminated beams fixed to concrete columns (arranged in modules) supporting a curved fritted glass panel to diffuse sunlight, allowing interior galleries to have a generous amount of natural light. This precedent demonstrates a subtle blurring of “outside” and “inside” or having the feeling one is outside yet inside. This design tactic is relevant to the proposed museum exterior response to having comfortable transitions from exterior to interior, particularly for outside activities, and urban spaces.

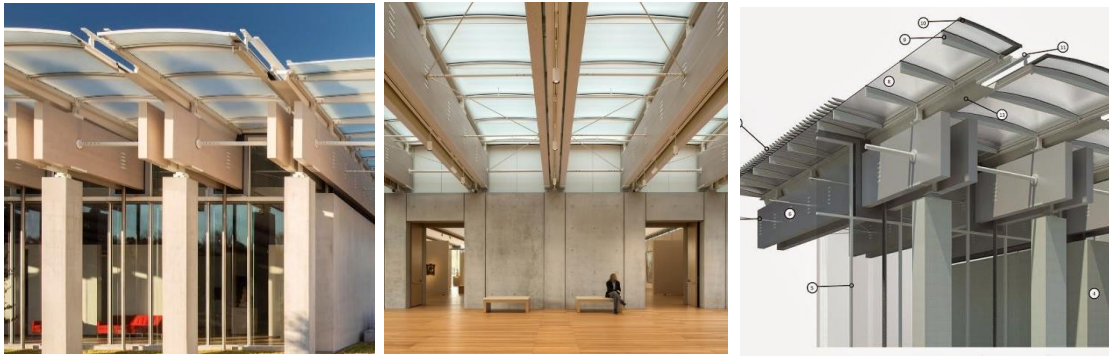


Figure 91. The roof structure of the new Kimbell Art Museum expansion, showing the translucent panels and fixed to the laminated beams (archdaily.com)

- **Firminy-Vert Church - Le Corbusier (France, 1963)**

This church was designed relatively late in Le Corbusier's oeuvre, and shows a complex and ambiguous interplay of mass, shadow, and light. As a common theme in his churches, Le Corbusier aimed to bring religious space back into its original roots, referencing ancient caves, with skylights punching in natural light such that the churchgoers' heads automatically turn upward as if to confront the gods or skyfather. The church form, a truncated *beton* concrete cone, acts as a "soundboard" where hymns and Bible passages being read out loud reverberate and vibrate in the space. Moreover, the form of the cone is square at the base and circular at the top, representing the "squaring of the circle", a metamorphosis from the earthly plan to the spiritual.

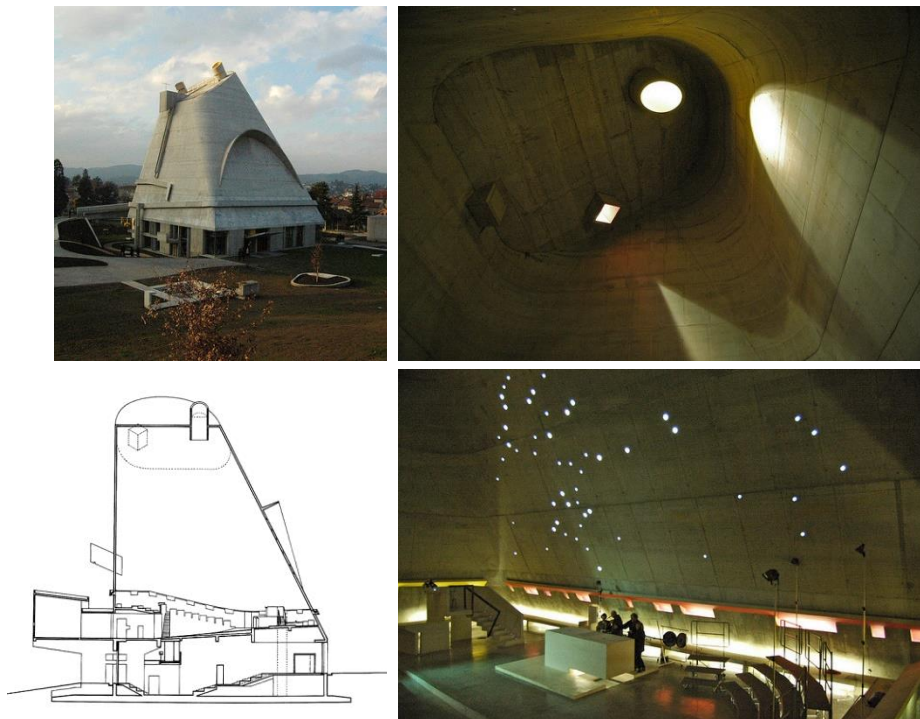


Figure 92. Firminy-Vert Church interior (archdaily.com)

## MATERIALS

- **La Congiuta - Peter Märkli (Switzerland, 1992)**

This small art gallery is designed with the intentions of being a “pilgrimage” or “shrine” to the art, or a refuge transporting the visitor away from the world. The architect, Peter Märkli, makes emphasises the use of “elemental” architecture, such as doorways, and cella-like spaces to display the art, lit from clerestories. The entrance doorway itself is hidden and ambiguous, requiring the visitor to find it. The gallery is built from in-situ concrete and left exposed. This shows the age of concrete, wearing down from the sun and rainwater. This represents the passage of time and decay. The gallery has no services, without bathrooms, electricity, or water (Unwin 2015). Thus, the building is *both* a temple and a ruin, idealised yet engaged in decay and time.

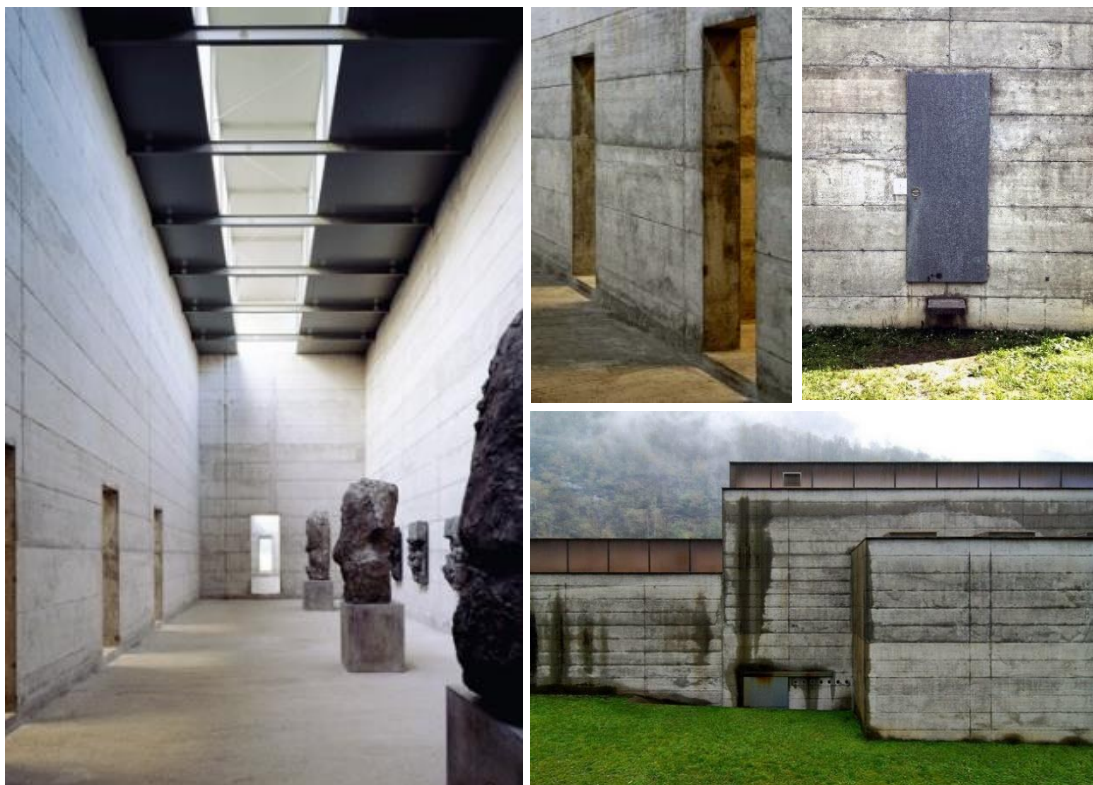


Figure 93. Interior of La Congiuta  
(hiddenarchitecture.com)

- **Bruder Klaus Chapel - Peter Zumthor (Germany, 2007)**

A small chapel with an unassuming exterior, is undercut by a profoundly startling interior: richly textured concrete walls, lit above by an oculus open to sky. A unique construction method created these textures, by casting concrete into 112 tree trunks as the frame of the interior. After the casting process was complete, the wooden frame was set alight, leaving the charred interior. Where the shoring left holes in the concrete, glass marbles were inserted, creating a jewel-like quality. The building was intended by Zumthor to have a sense of “silence, composure, presence, and just be.” These intentions had profound inspiration on the atmosphere, materiality and feeling in the proposed museum “haptic exhibition”.



Figure 94. The exterior of the chapel is unassuming, yet the interior provides a different experience entirely. The 112 tree trunks were burnt after the concrete was cast (left) (archdaily.com)



Figure 95. The texture of the concrete after burning. (archdaily.com)

## LIGHTING

- **Bagsværd Church - Jørn Utzon (Denmark, 1976)**

Another example of a building whose design had an unassuming exterior, (most likely to fit into its urban context and control weather) yet the interior is met with a remarkable explosion of light and space. The main intention behind these forms were the concept of rolling clouds, with light spilling through. The resultant space, the church altar, is rendered with light washing gently over the curved ceiling, appearing seemly weightless and “heavenly” referring to the sky. These soft curves were cast in place concrete, board-formed, spanning 19.4m and supporting the external aluminium roof and broken by clerestories. This inverts the traditional relationship of the roof and ceiling.



Figure 96. The exterior is modest, yet undercut by a light washing over a floating ceiling (archdaily.com)



Figure 97. The inversion of ceiling and roof (arquitecturaviva.com)

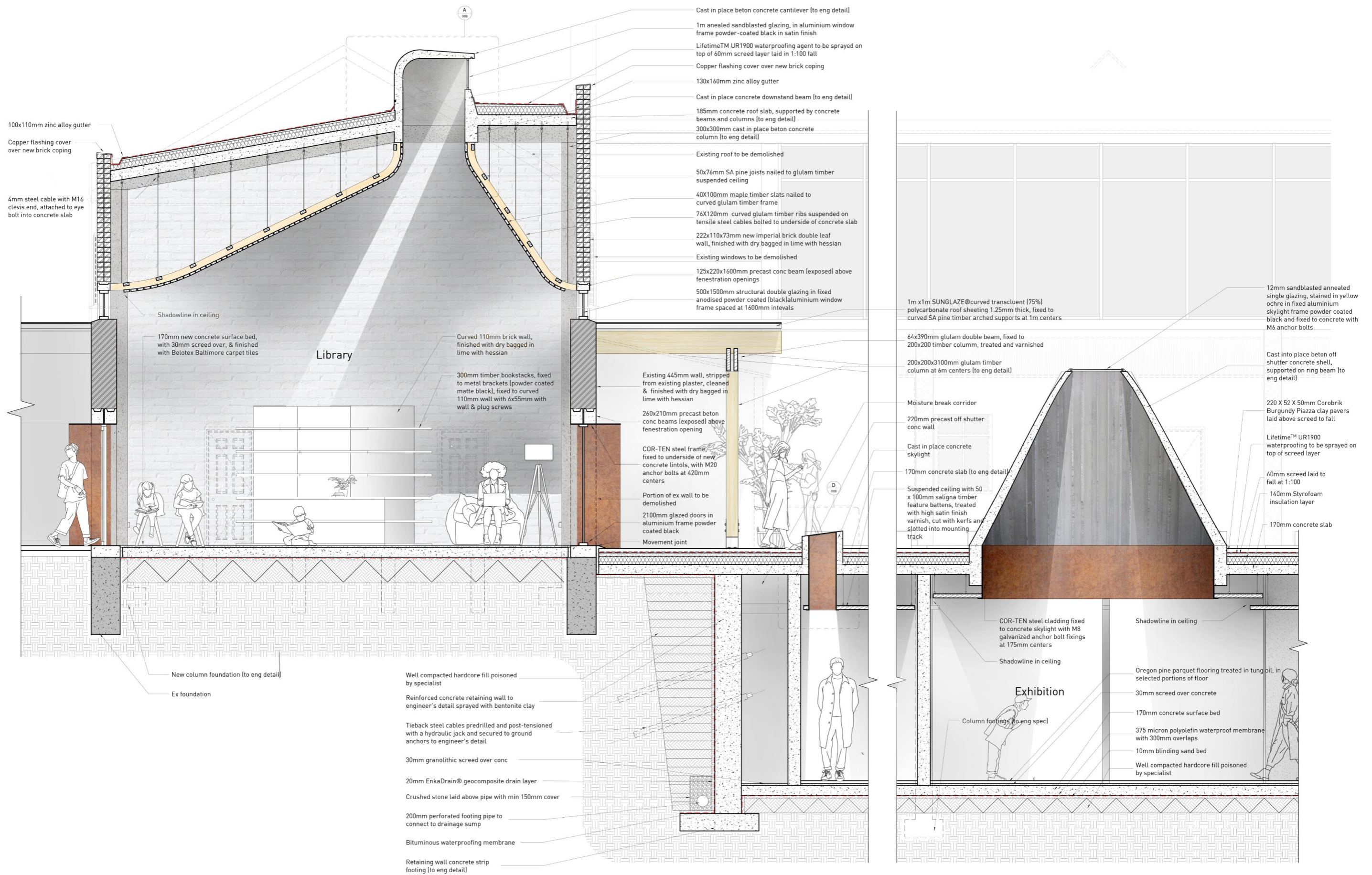


Figure 98. Technical section through library and portion of the exhibition (Author 2022)

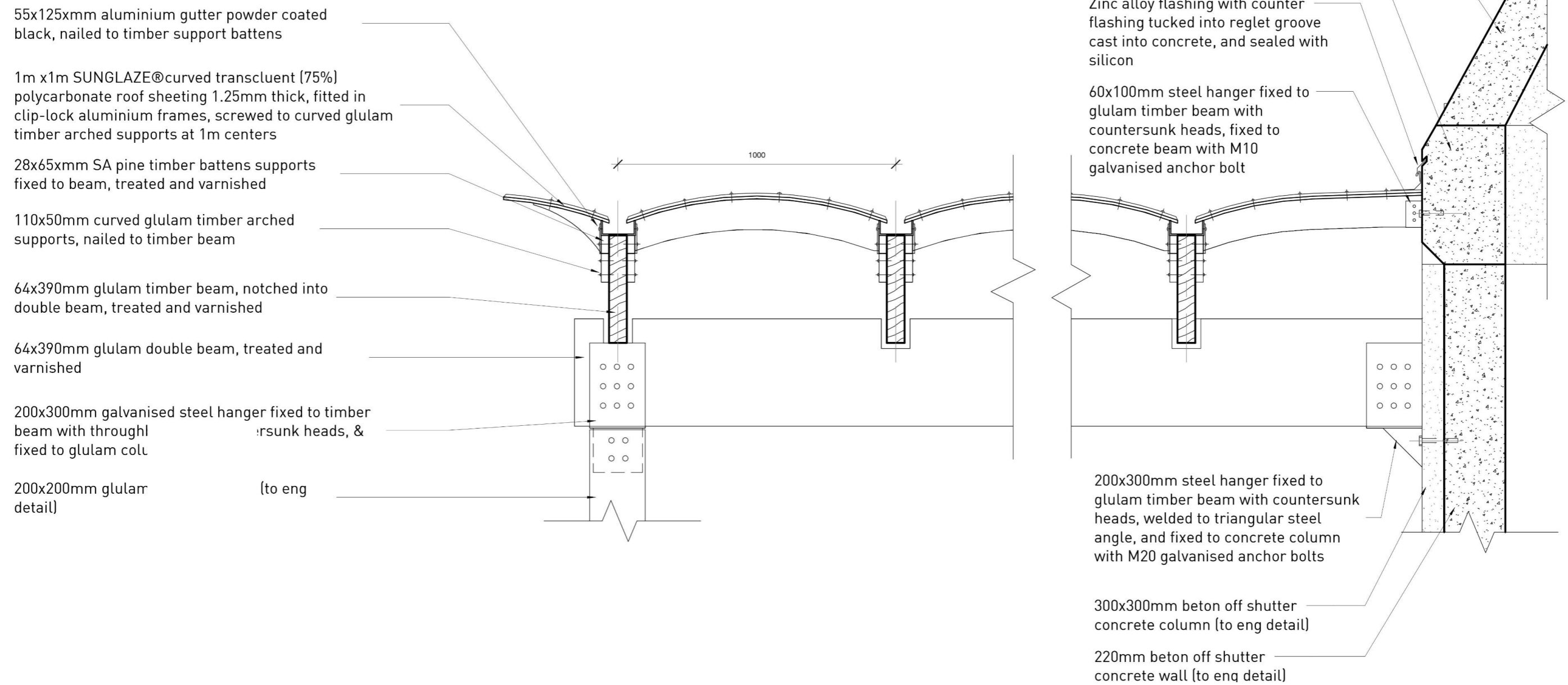


Figure 99. Detail of the pavilion roof structure and connection to concrete shell (Author 2022)

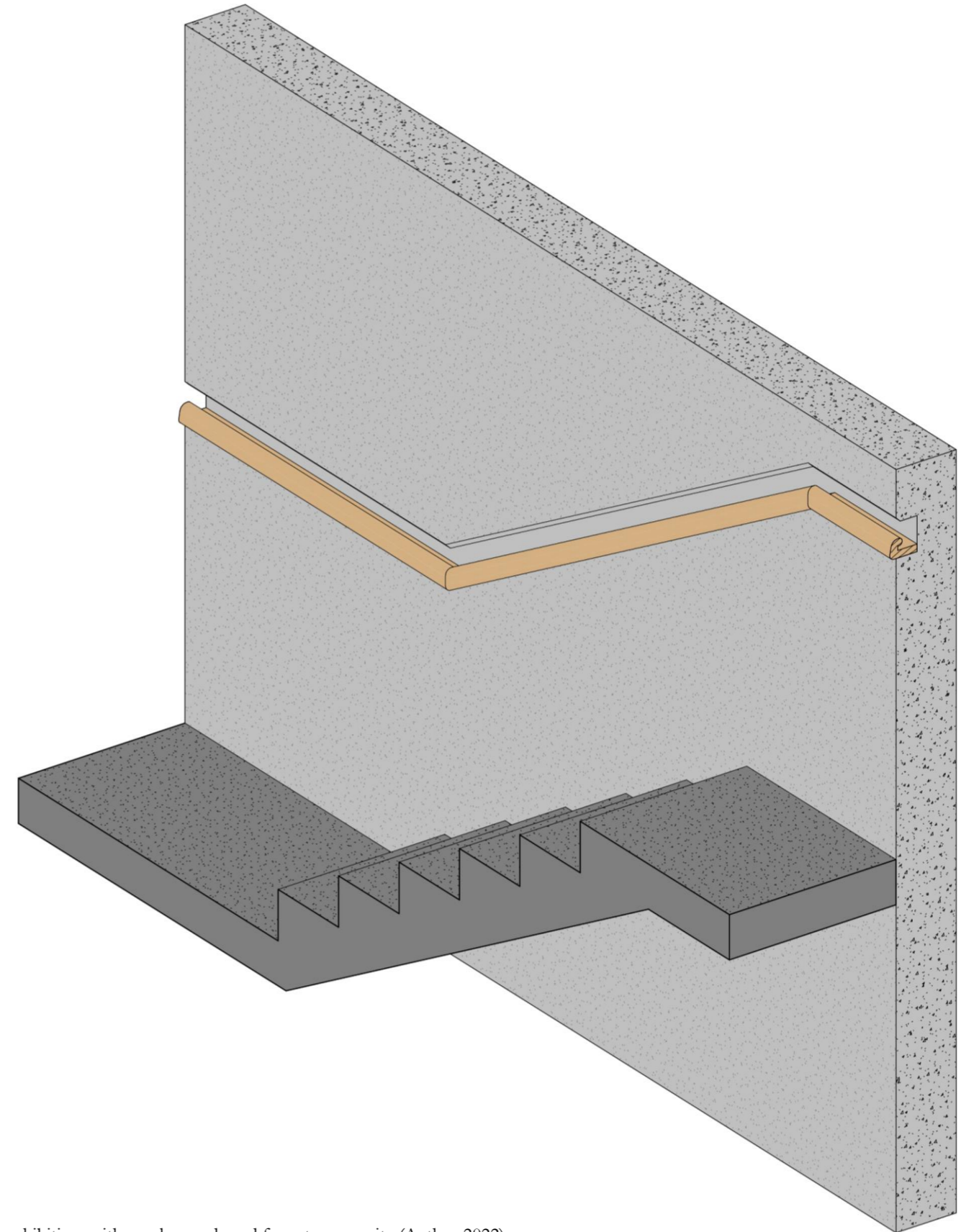
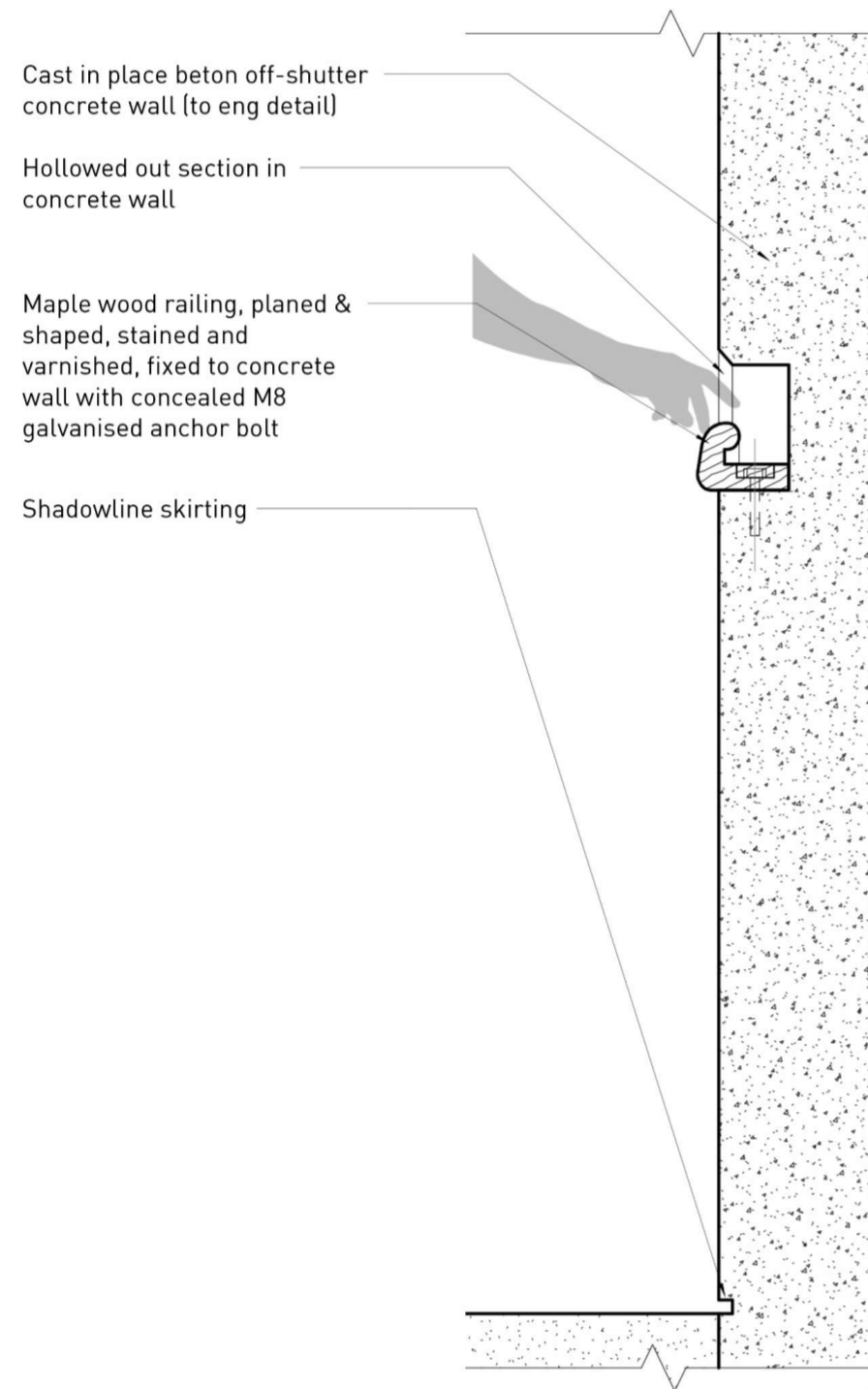


Figure 100. Detail of the balustrade in the steps descending to exhibition, with maple wood used from trees on site (Author 2022)

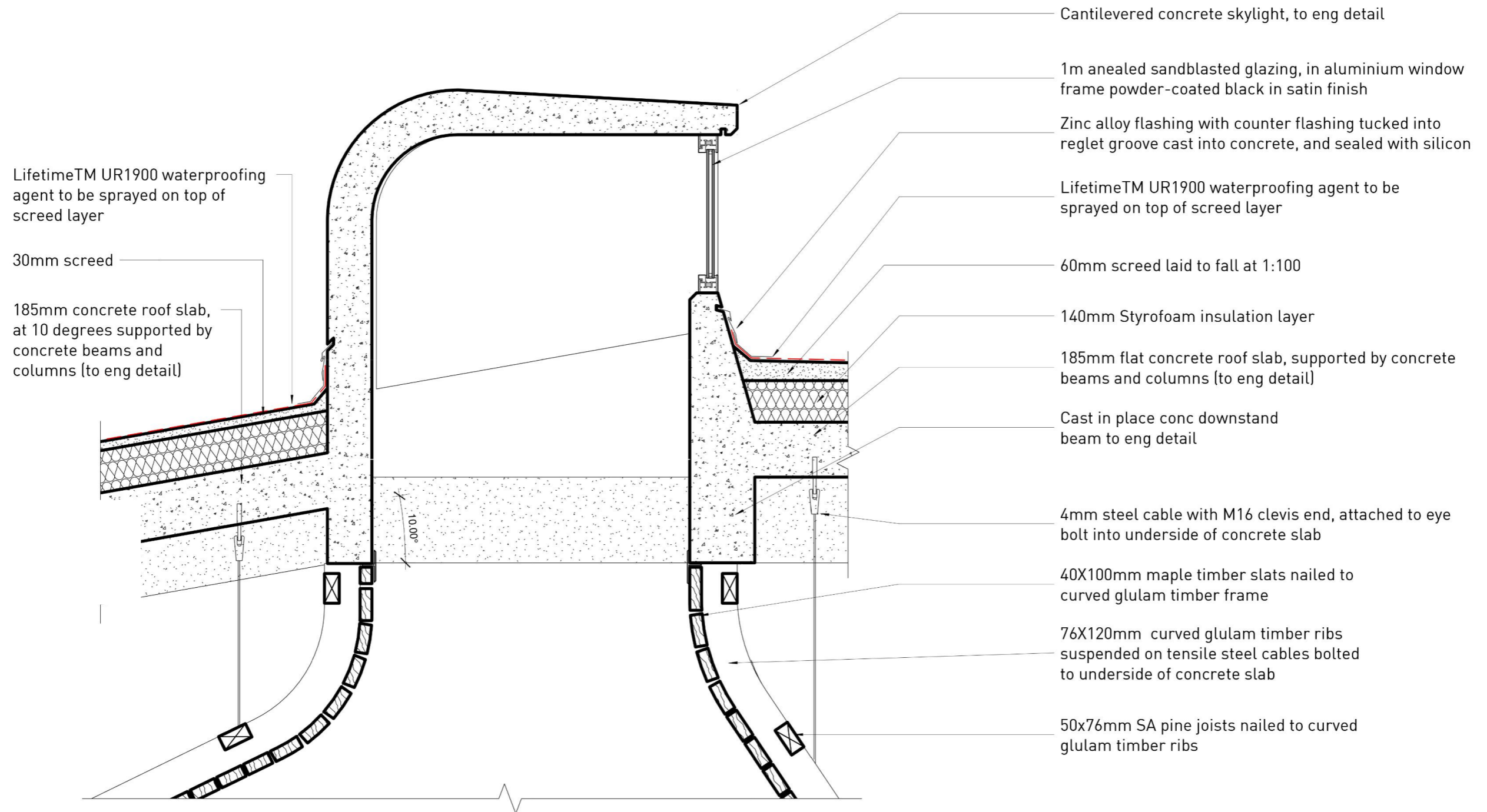


Figure 101. Detail of the skylight above the library (Author 2022)

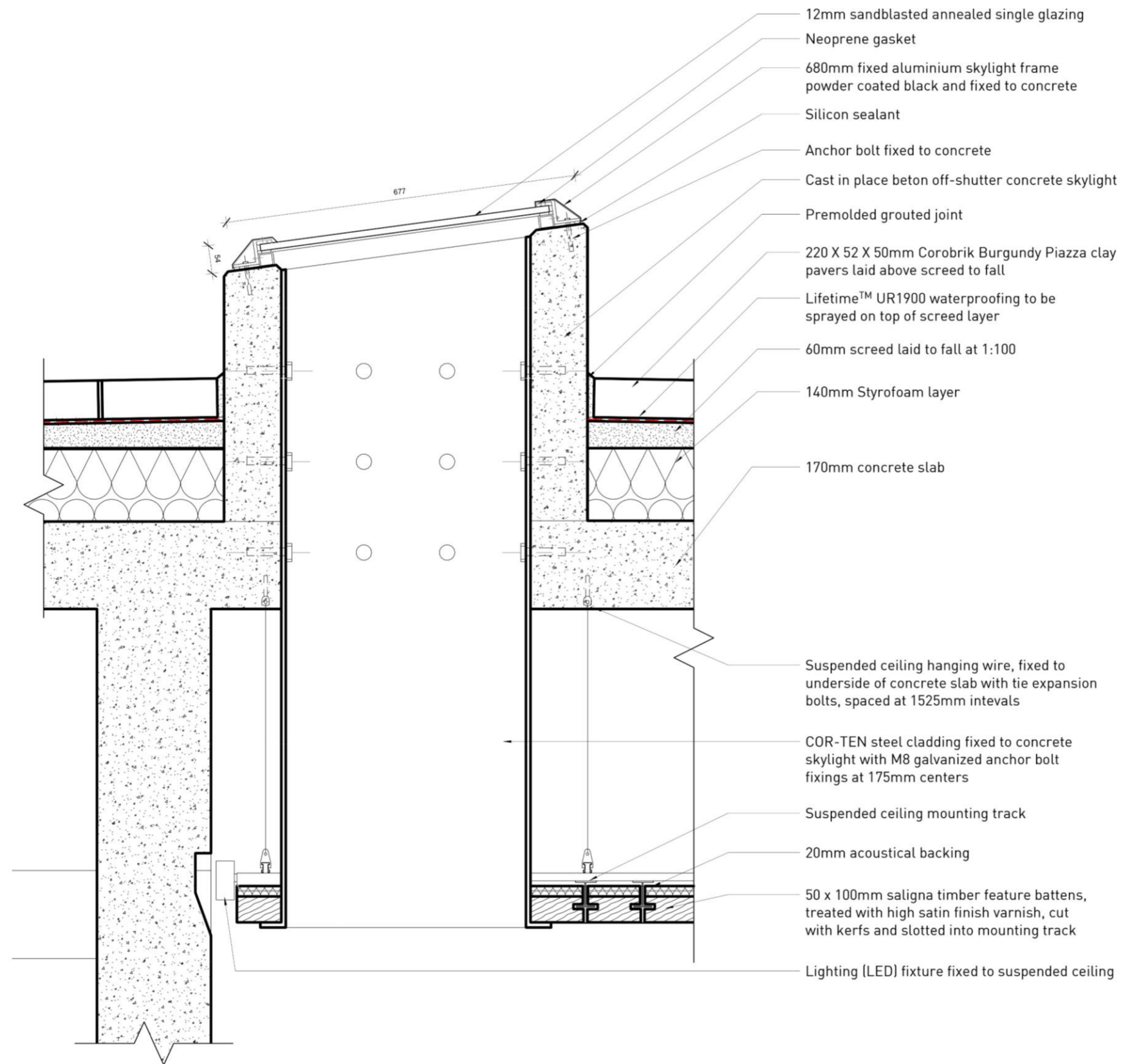


Figure 102. Detail of a skylight in the main exhibition space (Author 2022)

## 11. SUSTAINABILITY

This part discusses using renewable and passive sources of energy for building mechanical, electrical, and plumbing systems, and reducing reliance on active energy systems and load on the local municipal energy grid.

### PASSIVE ENERGY DESIGN: GEOTHERMAL

Since a portion of the proposed museum lays below ground, it is important that sufficient ventilation is provided to circulation air and maintain temperature and humidity levels. It is beyond the scope of this dissertation to perform a complex quantitative testing to predict these levels, so a brief overview and discussion of the proposed system will be undertaken.

A ground source heat pump is considered to regulate the flow of air in the underground portion of the museum. This system takes advantage of the stable temperatures below the earth's surface, (approximately 1m below the surface) and using these temperatures to heat or cool the internal spaces and keeping it at a consistent and comfortable temperature annually. This works by connecting a heat pump to the ground source, using a series of buried pipes that circulate a heat-conveying liquid, i.e. water. As this liquid moves through a ground loop it absorbs heat (during

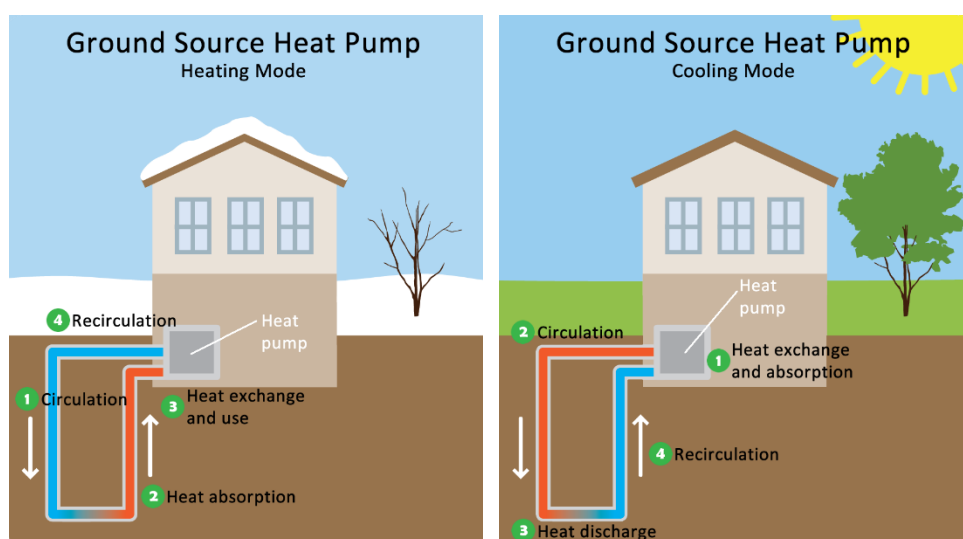


Figure 103. Geothermal pipes use the stable temperature of the earth to heat (left) or cool (right) in winter and summer periods respectively (epa.gov)

winter) or releases heat (during summer) and returns to a heat pump exchanger, which distributes the air. This exchanger uses minimal amounts of electricity to operate the heating/cooling process but is five times more efficient than active heating/cooling operations, therefore creating a net energy benefit (epa.gov).

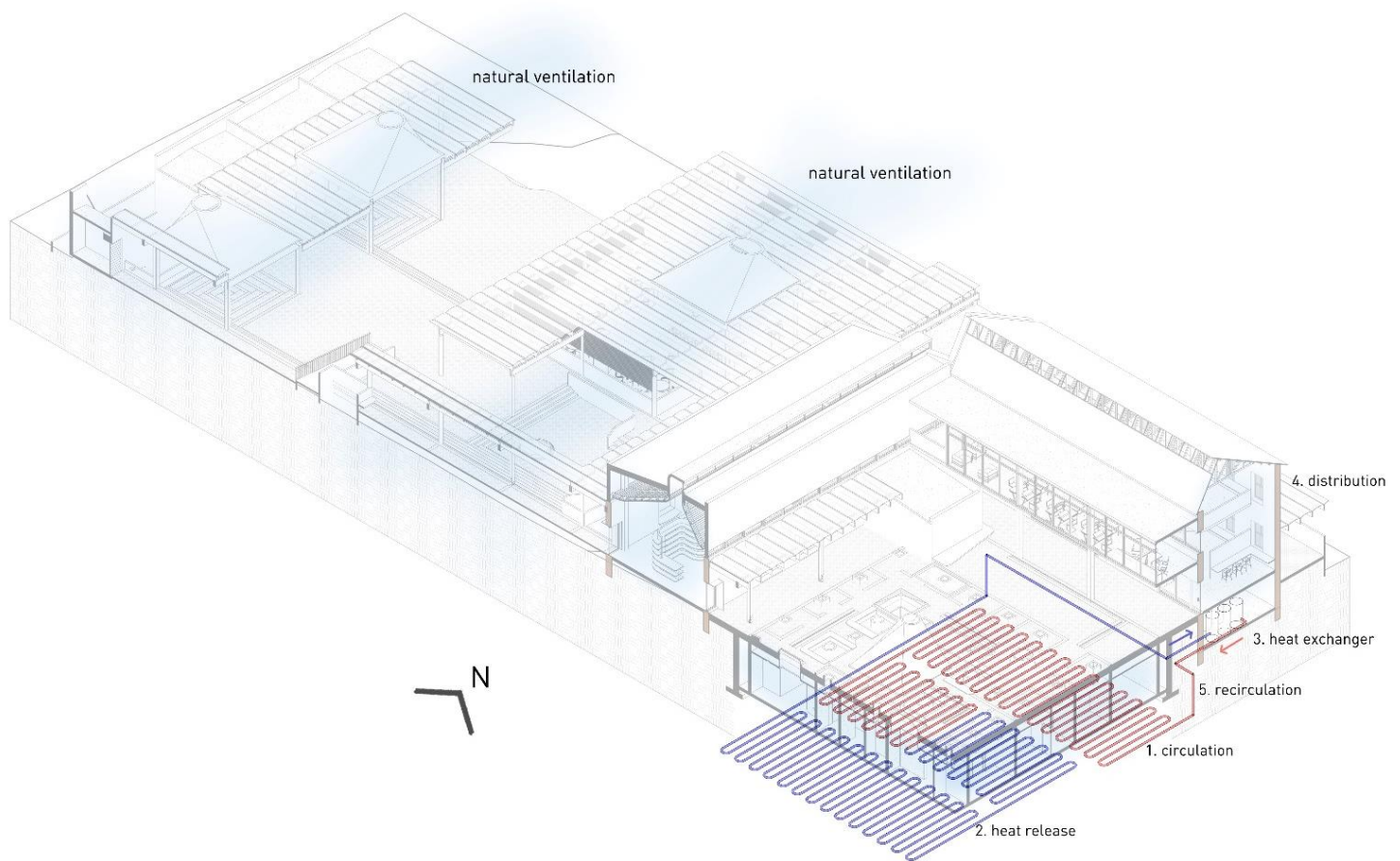
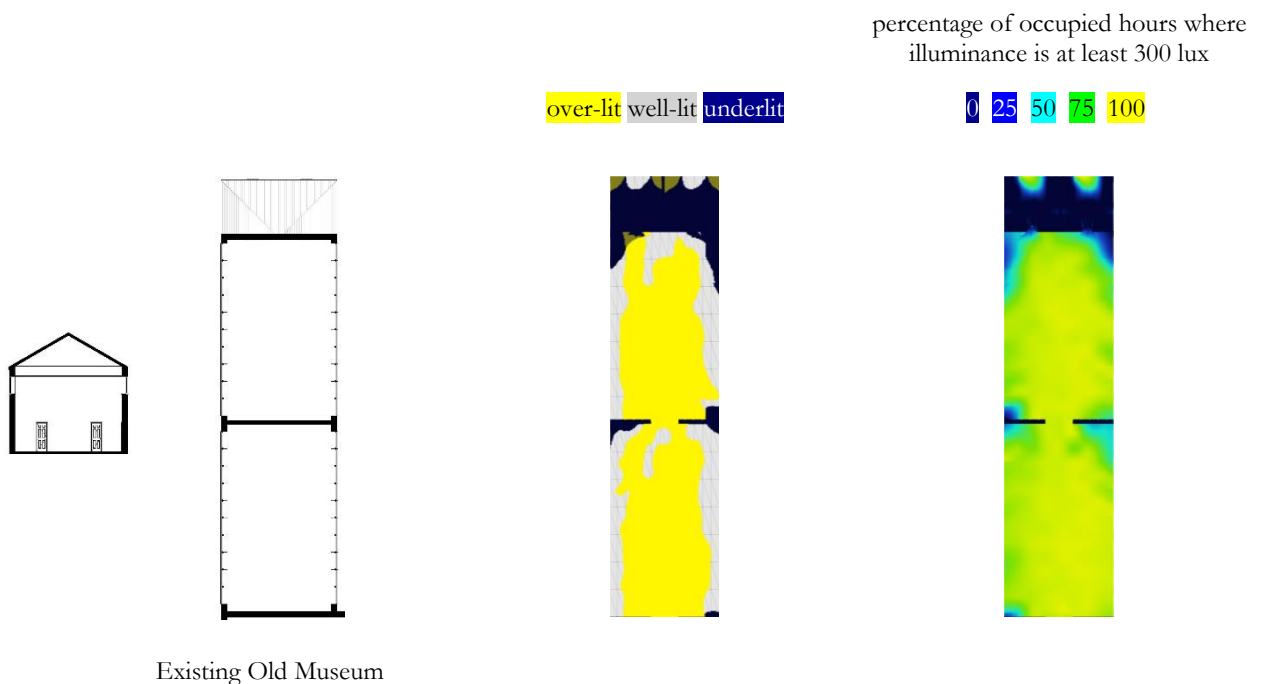


Figure 104. The proposed museum places geothermal pipes below the underground exhibition for heat transfer (1,2) and returns to exchanged (3) and distributed (4) and then recirculates (5). The open-air portions of the museum, such as the restaurant and marketplace receive natural ventilation while being covered by the pavilion (Author 2022)

## BUILDING COMFORT: NATURAL LIGHTING

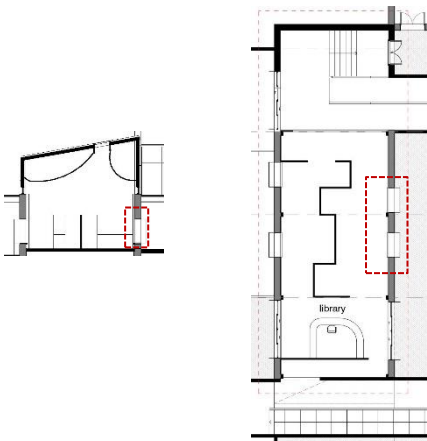
Light signifies the heavenly, poetic dimension of architecture. It provides the connection to the heavens and the sky, the mythological dimension of the gods, immortals, and higher modes of thinking. The **library** is the particular space of focus, since this embodies the notion of the *overworld* realm, and the feeling of enlightenment from knowledge. The featured skylight and suspended ceiling allow light to fall downward and wash over the ceiling gently, allowing the eyes to draw upward toward the heavens. Historically, this space was used as the main exhibition spaces, lit from clerestories. This is recalled in the new design with new clerestories, but with half the height of the previous windows. In the subsequent years, this space suffered from overheating and over-lighting such that it was later boarded over. Using the lighting analysis tool Sefaira, this space predictably was over-lit with dark underlit corners. To address this, several iterations in the new intervention were analysed, testing this space under occupied hours under 300 lux, for softer ambient light for reading. Successfully, this space achieved a greater percentage of well-lit daylighting, with minimal over-lit areas near window seats and glass entrance doors.



percentage of occupied hours where  
illuminance is at least 300 lux

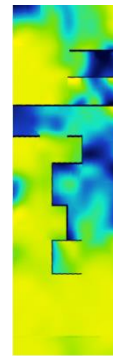
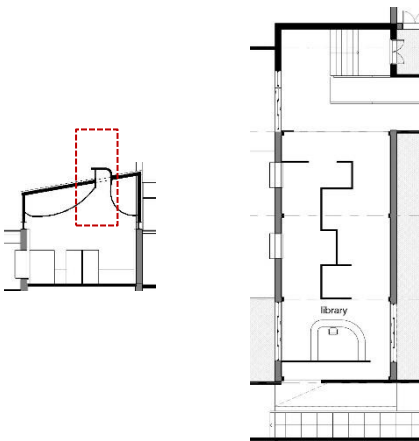
over-lit well-lit underlit

0 25 50 75 100



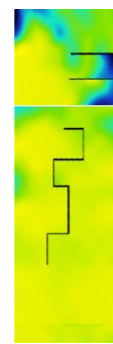
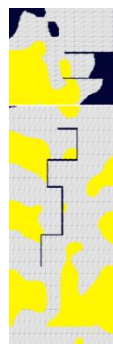
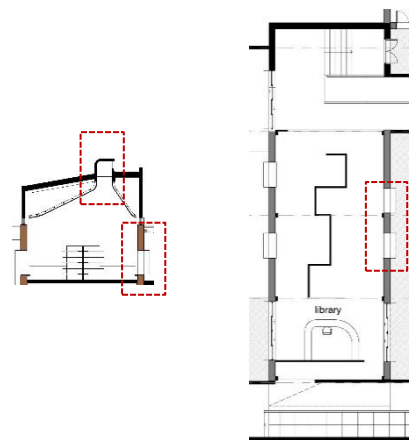
**RESULT:** Spaces are overlit

Windows added on east wall



**RESULT:** Underlit corners

Concrete roof monitor added to diffuse light



**RESULT:** Balanced natural light with minimal underlighting

Combined previous iterations,  
suspended ceiling straightened

## REGENERATIVE SYSTEMS: WATER HARVESTING

The presence of water has historically been a significant feature of the Old Museum, being the primary cause of the museum's decay and ruin due to a burst water pipe twice on separate occasions. However, in this new intervention, water is celebrated, as a meaningful feature mythologically representing the primordial waters of which life sprang, and as a feature of making urban public environments inviting with the sounds of water, in a small water feature in the public square outside the library. To make the museum regenerative in its energy footprint, rainwater is harvested and collected to be purified and stored for usage around the building. Water is collected from roofs and paving surfaces, and drained into an underground water tank with filters, and thereafter pumped into a water storage tank for usage in the building.

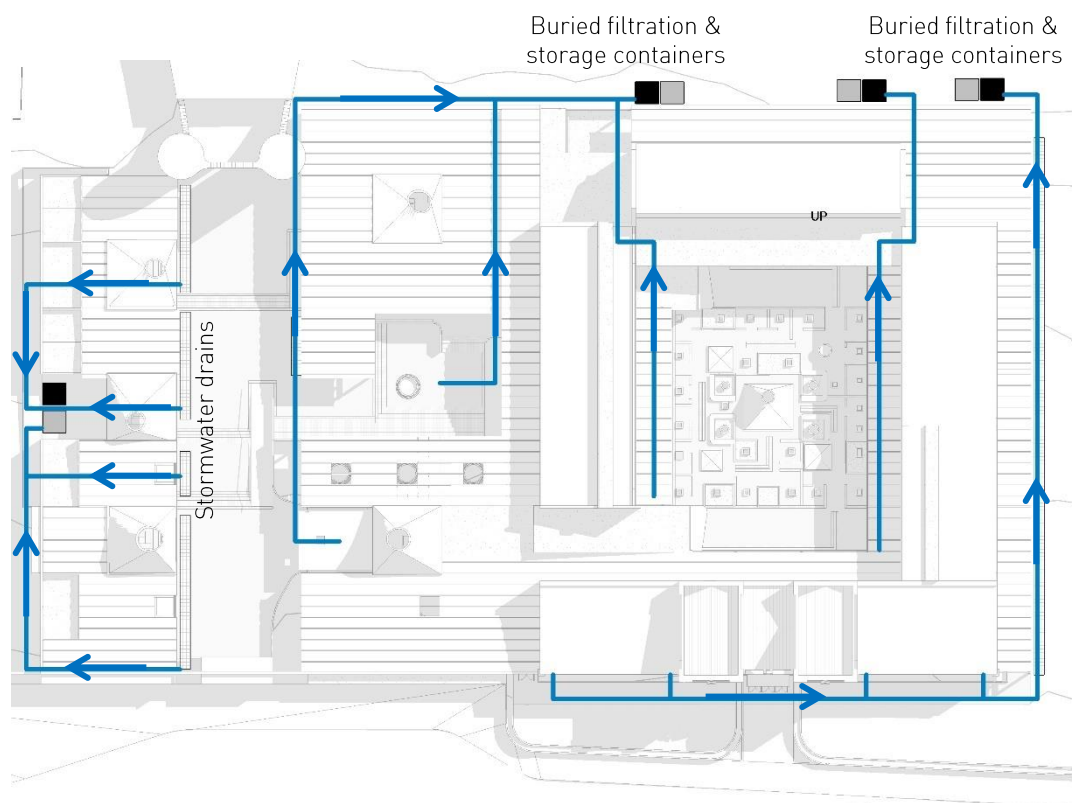


Figure 105. Rainwater collection diagram (Author 2022)

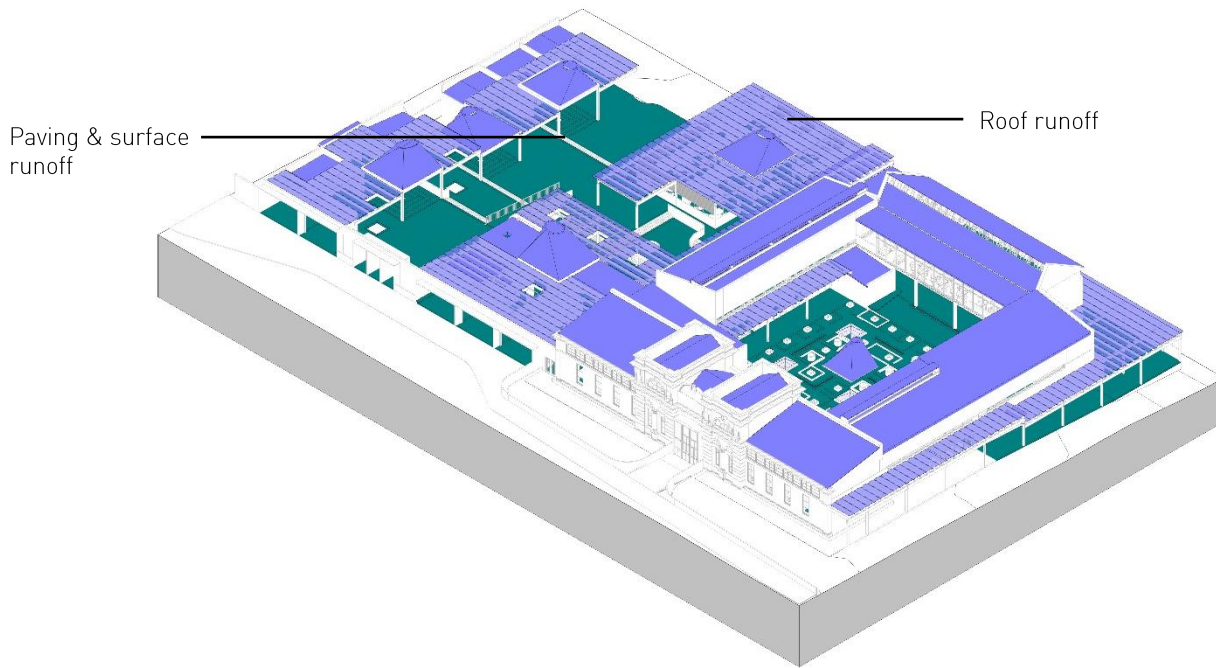


Figure 106. The collection areas of the roofs and paving areas (Author 2022)

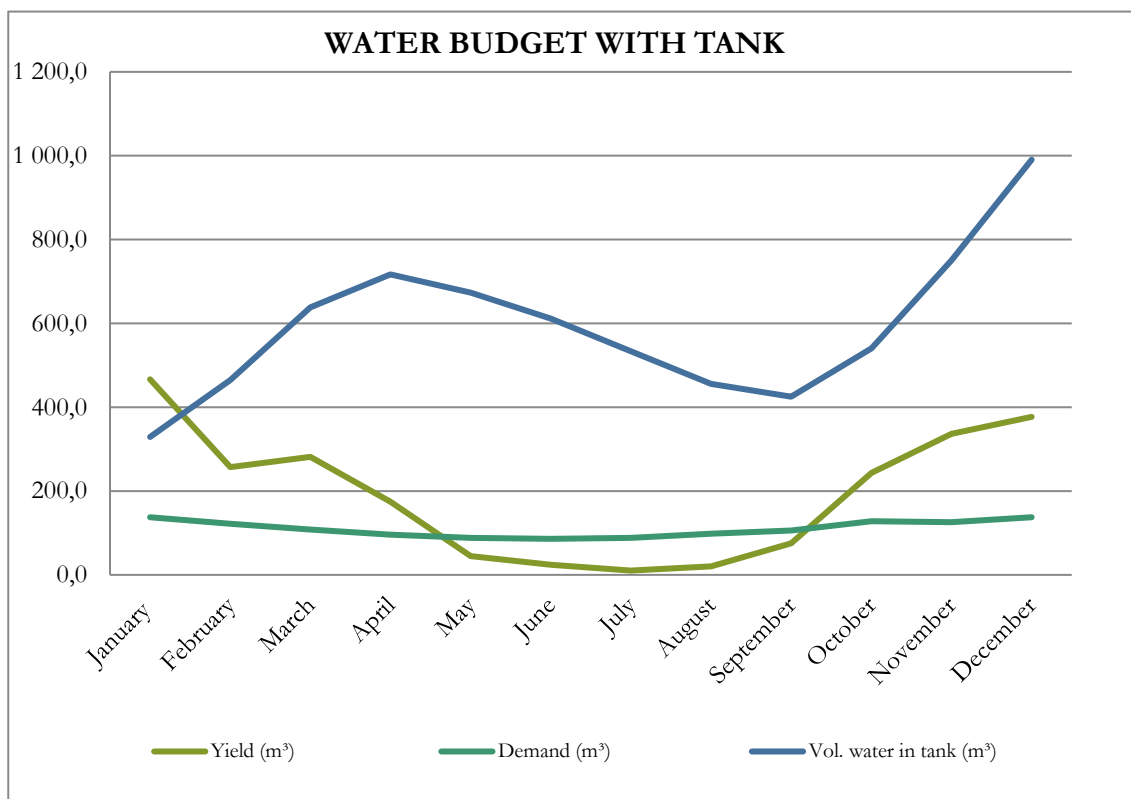


Figure 107: Table of water harvesting (Author 2022)

## SUSTAINABLE BUILDING ASSESSMENT

The SBAT measures the potential of sustainable performance in a building. It considers a holistic and integrated approach, using criteria set out by different sectors and gathering an average score point (1 to 5) to assess its rating. This tool was used to assess the proposed museum, which achieved a final score of **3.8**, which is regarded as having a strong capability to enable occupants (Gibberd, 2020) to achieve HDI and EF targets and live sustainably.

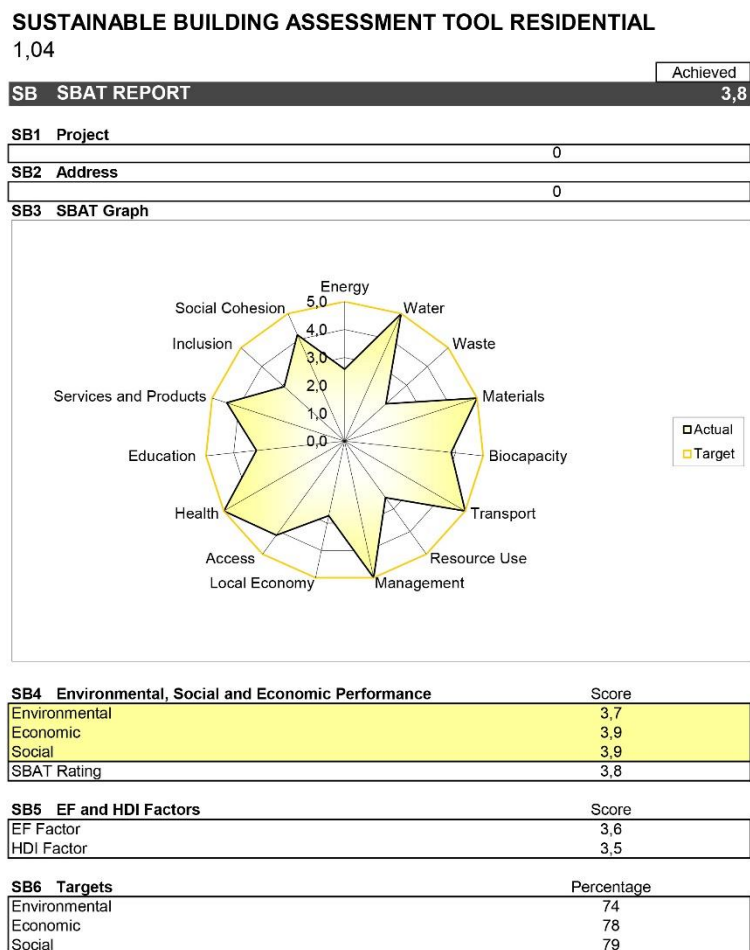


Figure 108. The SBAT gave a score of 3.8

SBAT score	Sustainable built environment performance
5	Built environments provide <b>full</b> capability to enable occupants to achieve HDI and EF targets and live sustainably.
4 - 5	Built environments provide <b>excellent</b> capability to enable occupants to achieve HDI and EF targets and live sustainably.
3 - 4	Built environments provide <b>strong</b> capability to enable occupants to achieve HDI and EF targets and live sustainably.
2 - 3	Built environments provide <b>partial</b> capability to enable occupants to achieve HDI and EF targets and live sustainably.
1 - 2	Built environments provide <b>limited</b> capability to enable occupants to achieve HDI and EF targets and live sustainably.
0	Built environments provide <b>no</b> capability to enable occupants to achieve HDI and EF targets and live sustainably.

Figure 109. The SBAT scoring table (Gibberd 2020)

## CONCLUSION

The modern museum's reluctance to change and failure to look past the ideals of the Enlightenment view of history has displaced it from urban life. For Pretoria, and by extension the majority of South African cities, this has resulted in a distancing in museum culture. In this revised design iteration, it re-considers the urban context more sensitively than previous concepts, by allowing transitions from the street edges of the zoo into a public square serving the museum in addition to the zoo, yet maintaining the abstract, intangible qualities of mythology in the museum "experiential" spaces.

## **PART 4: CRITICAL REFLECTION**

## 12. CONCLUSION: DOES MYTHOLOGY AND MUSEUMS MATTER?

### POSITION

The idea of “museum” has a noble intention of communicating some connection to the past to people. However, a 21<sup>st</sup> century museum cannot function in isolation in its cultural context. In the post-colonial society, an institution that decolonises history from a Western epistemological point of view, requires a challenge to contest it. This does not imply the herald of its demise, but simply highlights the way history is framed. For the South African museum, it means a past that remains outside the present day. In South Africa’s turbulent history, such a distancing would invoke the aphorism given by philosopher George Santayana: “those who cannot remember the past are condemned to repeat it.”<sup>4</sup> It can therefore be seen, museums do more than provide a connection to history that goes beyond spectacle or “edutainment”. They allow us to examine our humanity and express our understanding of the world.

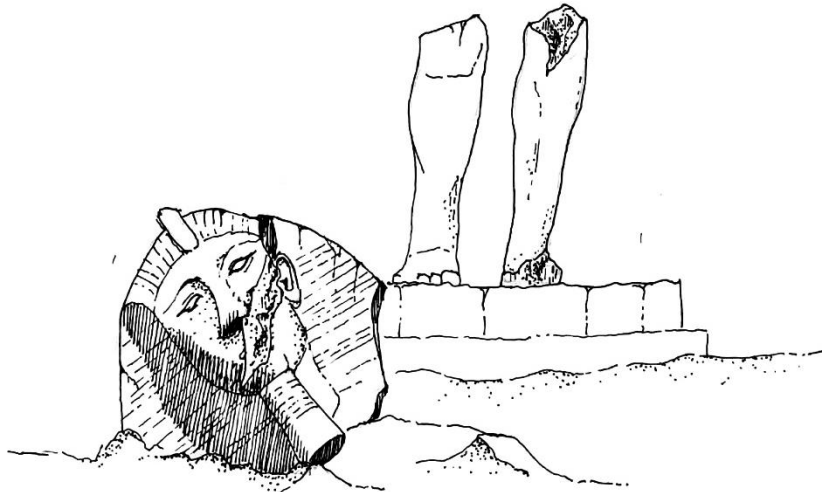


Figure 110. The remains of Ozymandias, as described by Percy Bysshe Shelly, is a wreck of decay, swept away by the sands of the desert. Contingency and flux are the left and right hands of history (Author 2022)

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<sup>4</sup> <https://bigthink.com/culture-religion/those-who-do-not-learn-history-doomed-to-repeat-it-really/>

## INTENTION

The primary intention of this study was to revise the history museum from its Western viewpoint, through a lens of mythological cosmogony and bodily experience. The rapid development of science, reason and discovery of the New World beginning in the Renaissance through to Enlightenment and Modernism, consequently changed our attitudes towards the past. Time became packaged into a “fictional” quantity, and history became a set of events distinct from the present. Indeed, history is no longer contingent and ambivalent, but knowable, less nuanced, and composed into *facts*. Pre-industrial societies did not have these concepts of reality. Their reality was affirmed through mythology, stories of gods, heroes and monsters and larger than life creatures that signified powers beyond our control. These stories, however fictional, solidified an existential foothold through viewing oneself in the larger whole, giving explanations to phenomena and “filling in the gaps”, or *giving meaning to reality*. Across the ancient, pre-colonial civilization, there has existed universal themes of mythos. Mythic cosmogony was a metaphor for the human condition: the cycles of creation and destruction in the cosmos and cycle of aging in humans. Both Enlightenment and mythological frameworks set out to give *structure* and *explanations* to history, the metaphysical reality, and the possible future, but it was mythology that gave *meaning* and richness to human experience.

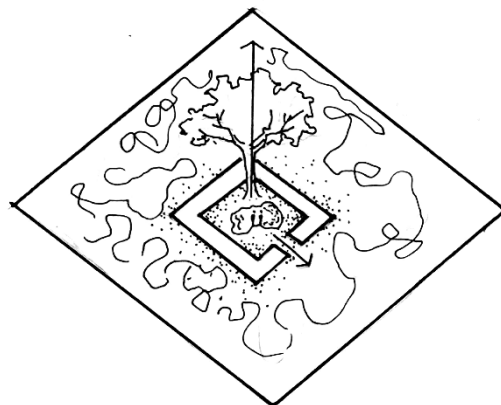


Figure 111. Emanations from chaos (Author 2022)

## EXPLORATION

To explore these themes, a framework was set out to which critique the variations of design of the Old Museum site. To this end, the architecture is organised around mythological concepts of space: the three realms of underworld, earth and sky. The resultant design demonstrated to be much too enclosed and introverted such that, it was not engaging enough for the immediate public. It can therefore be seen that museums require people's engagement and inclusion in order to function and become relevant and realise the ideas of myth and history. A diverse program and a wide range of activities create a transition from the urban external realm into the hidden interiors of the museum.

## SYNTHESIS

In response to the above critique, a revised program was introduced to bring rich, public urban space encounters and a front for the existing zoo. To reach this end, there was the process of trial and error, erasure and addition of design elements using hand-drawn drawings, maquettes and computation analysis tools.

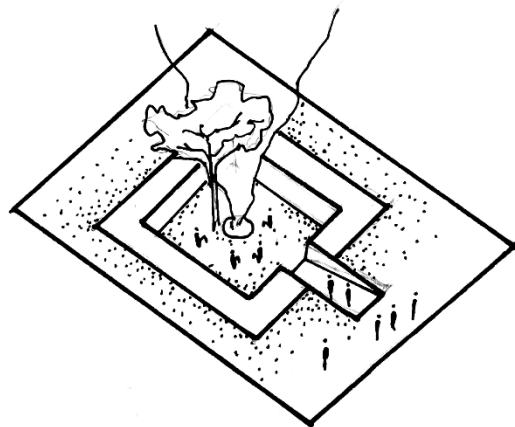


Figure 112. The hearth was the first “museum” our ancestors gathered, to tell and exchange stories and muse on the vastness of the cosmos above (Author 2022)

## EPILOGUE

This project has highlighted the complexity and scope of challenge faced the South African 21<sup>st</sup> century museum. It was a test of my design abilities, in deconstructing normative museum environment and culture. Indeed, at times the project scope extended beyond the delimitations of this type of study. However, more importantly was the value of process and iteration. I believe these tools have been valuable in the making of architecture, since this leads to the emergence of complexity and richness of design. I strongly believe in the potential museums have to capture the imagination and transport oneself into the past. Perhaps these ideals are considered too lofty, romantic or acontextual. Yet I remain resolute behind the idea that we (as humans), are the myth-making animal and meanings, however fictional, as essential for existence. It is therefore necessary to reconsider pre-modern conceptions of time, as it is hoped this would provide a rich, deeper, and more human experience in the shape of history.

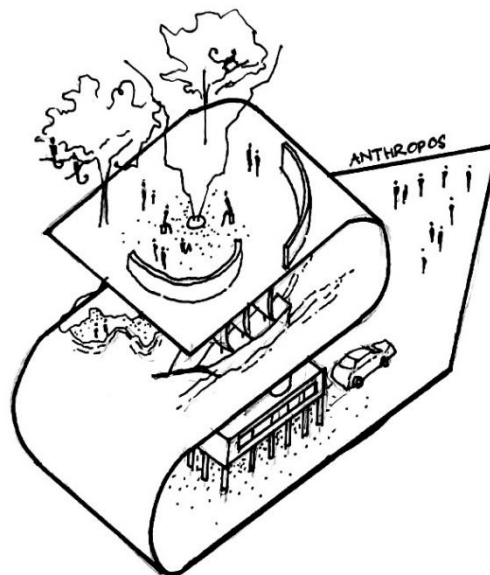


Figure 113. The “shape” of history (Author 2022)

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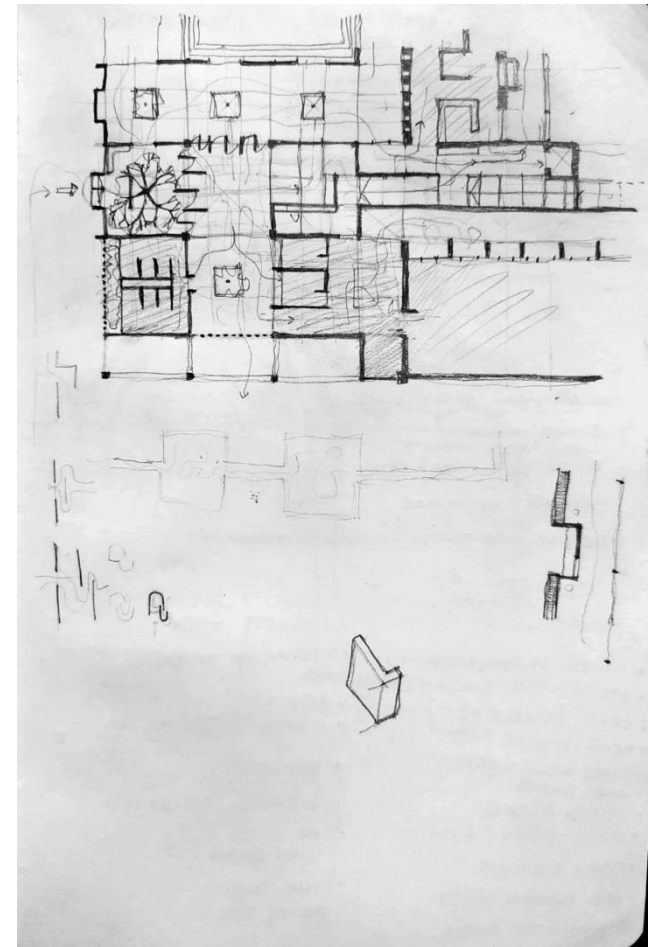
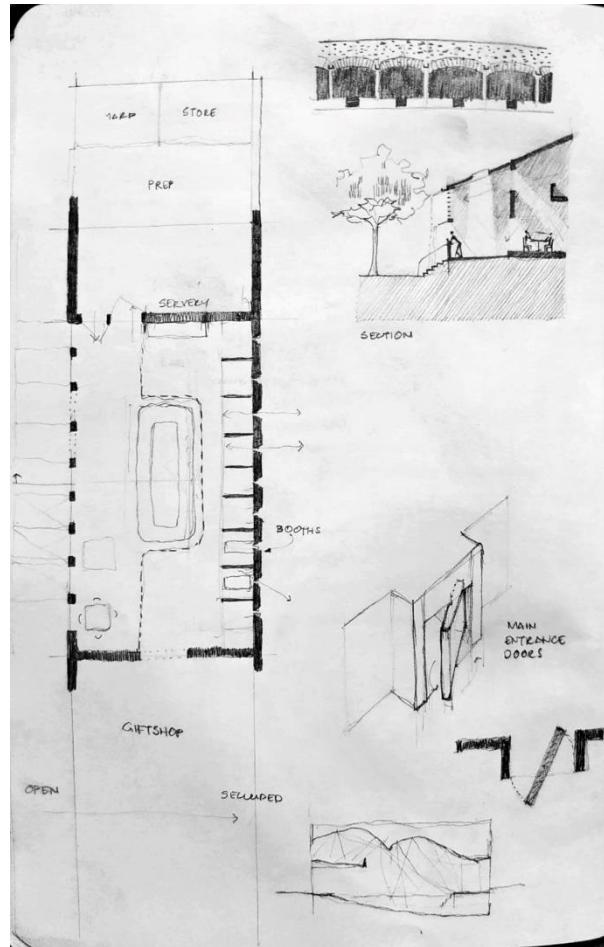
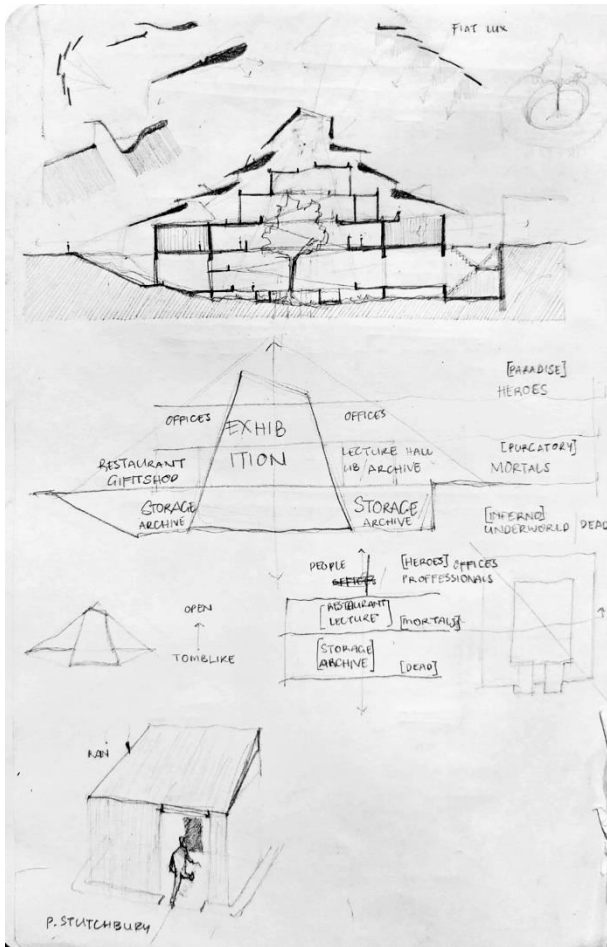
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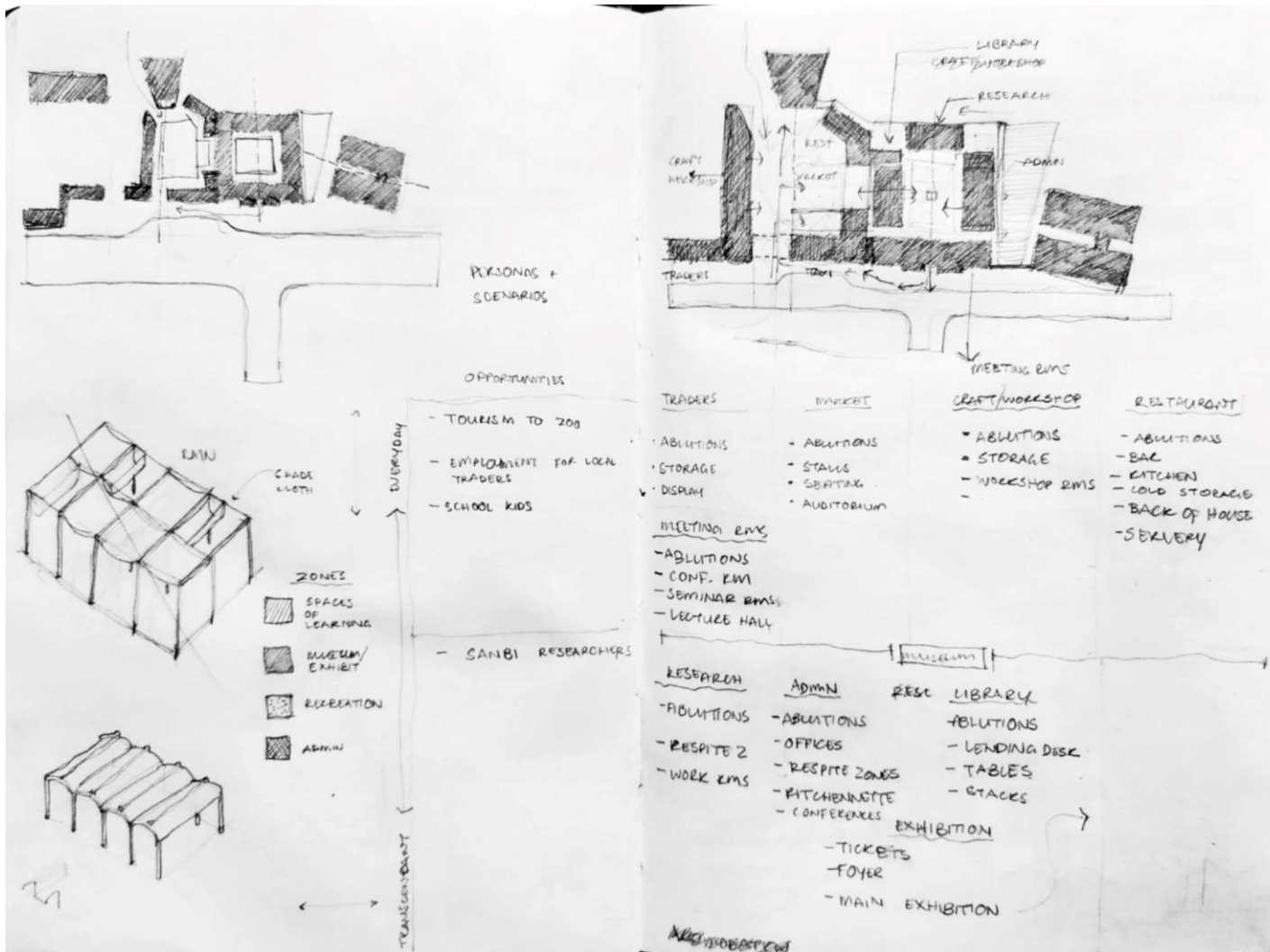
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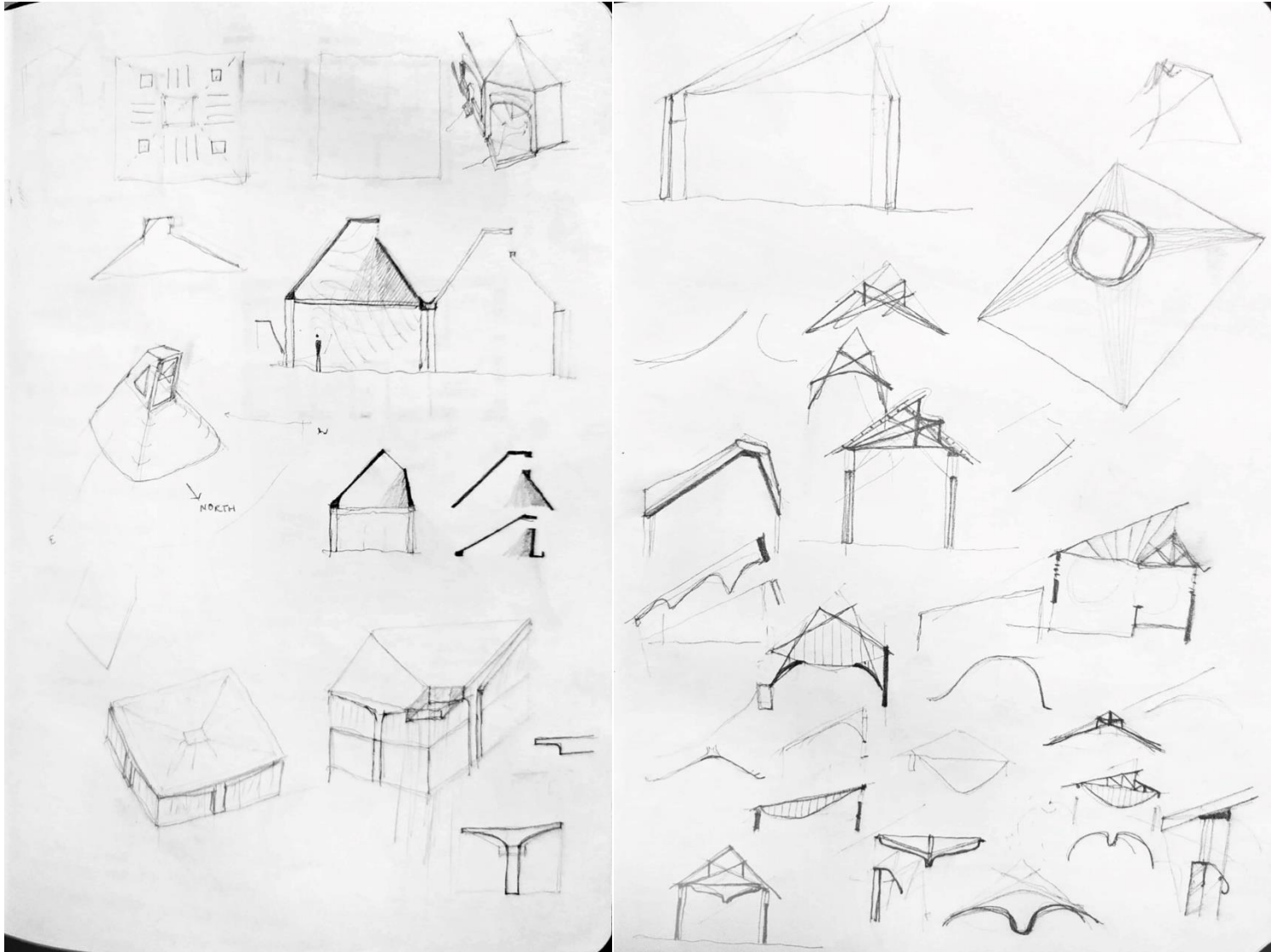
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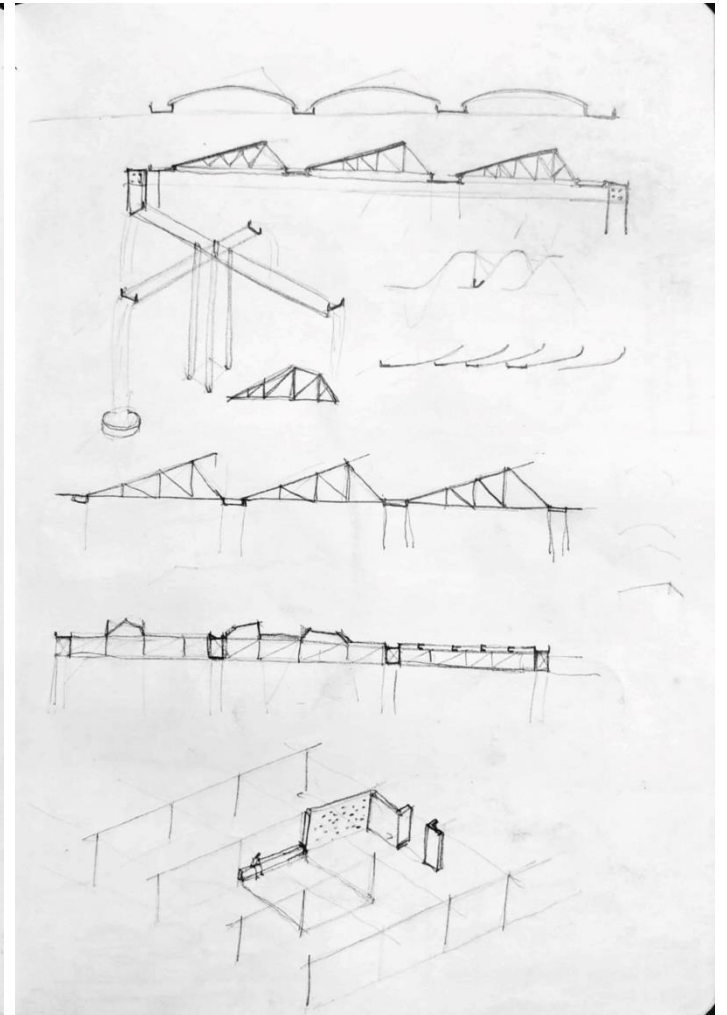
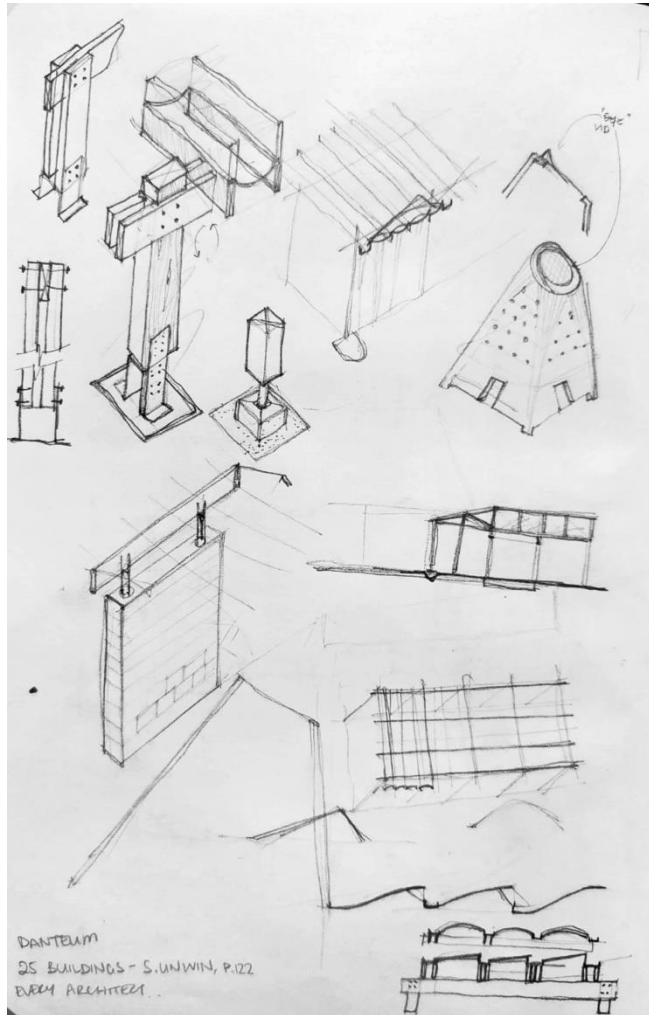
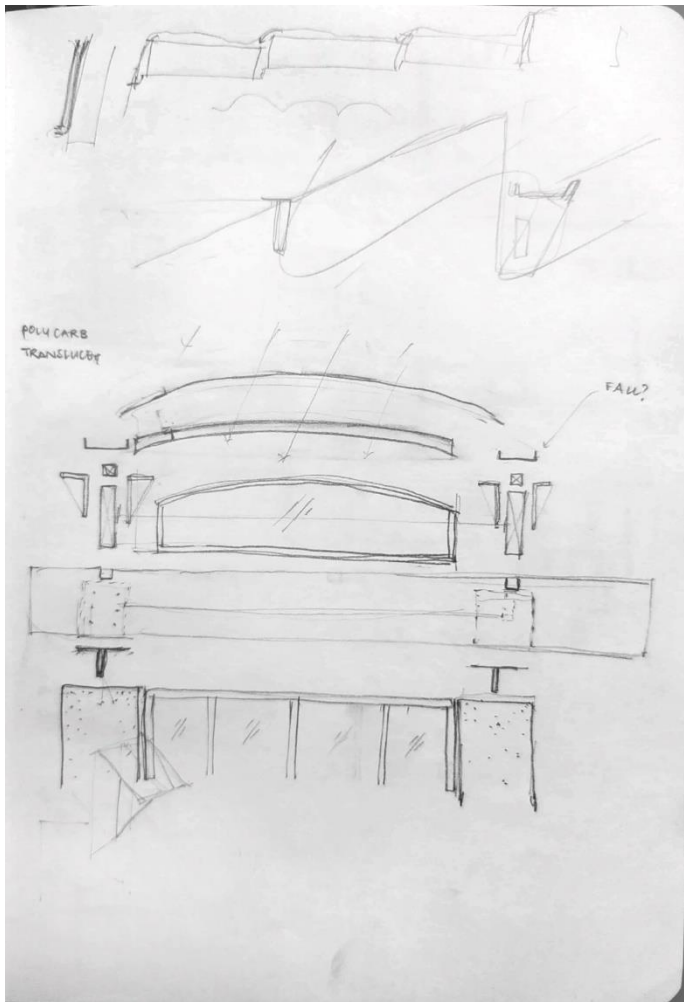
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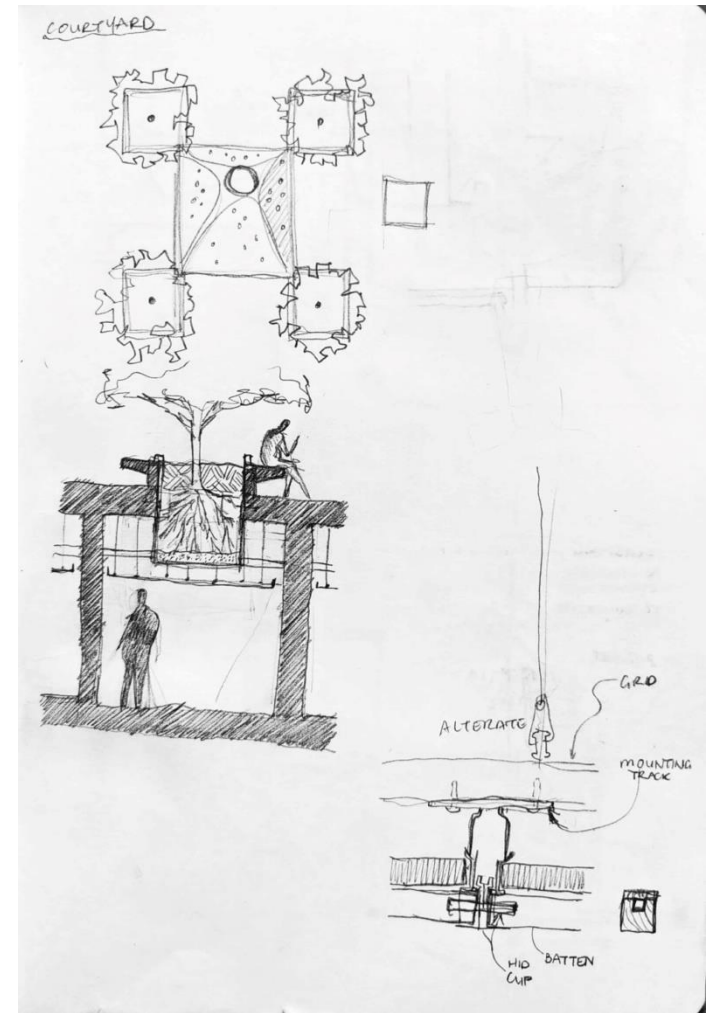
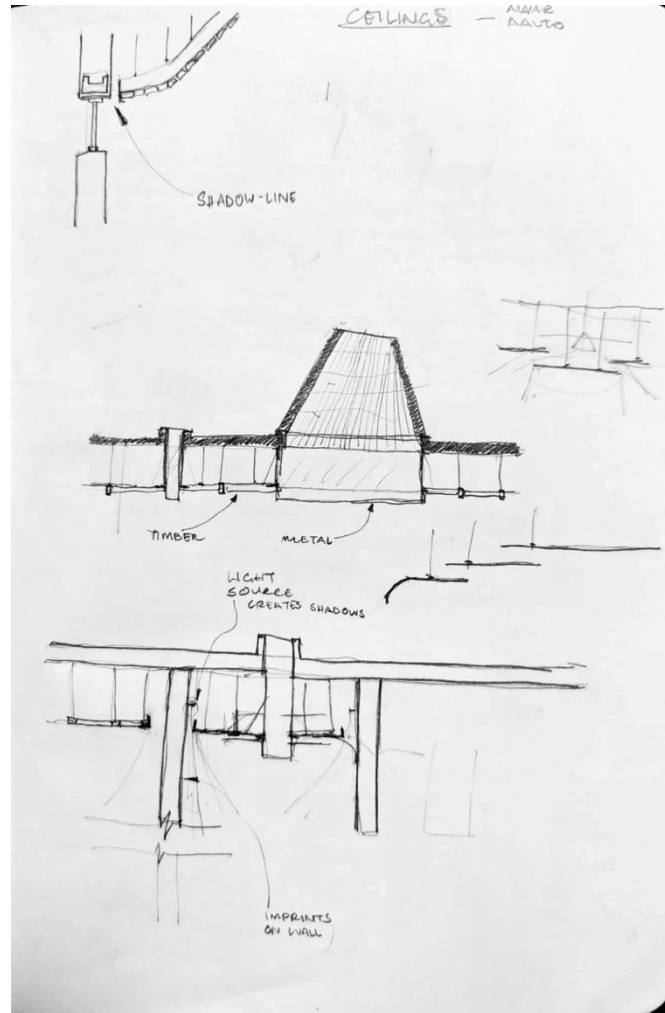
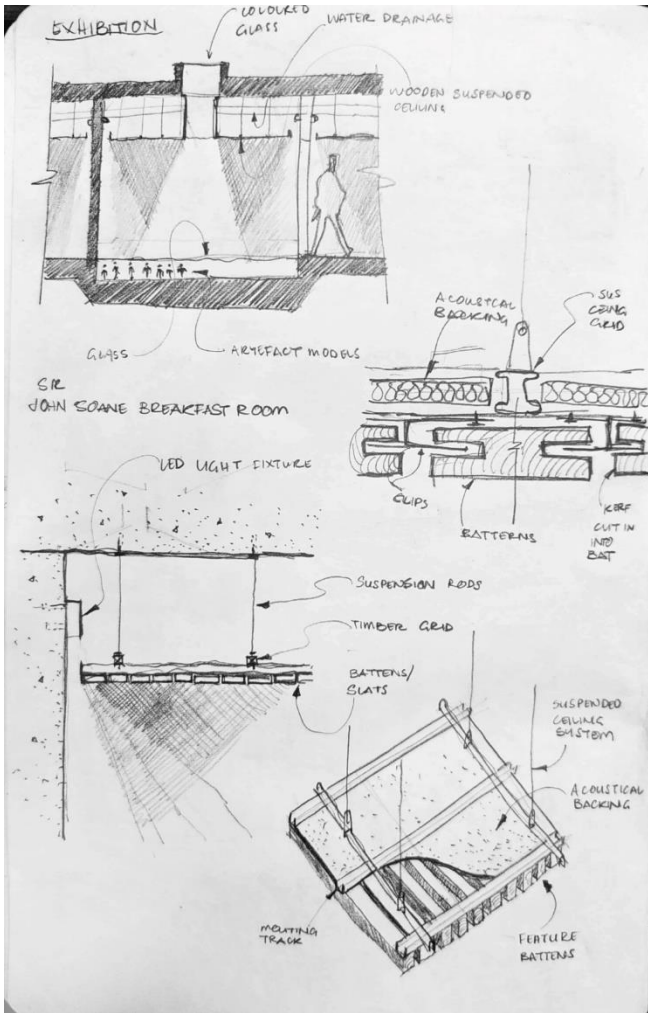
# APPENDIX A: DESIGN NOTEBOOK

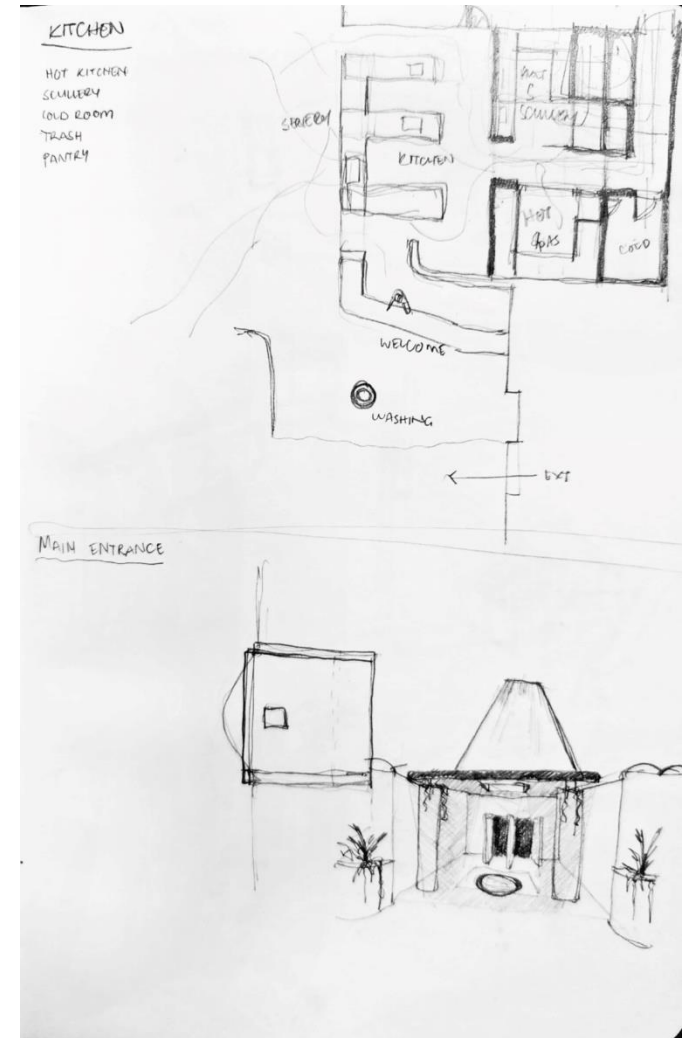
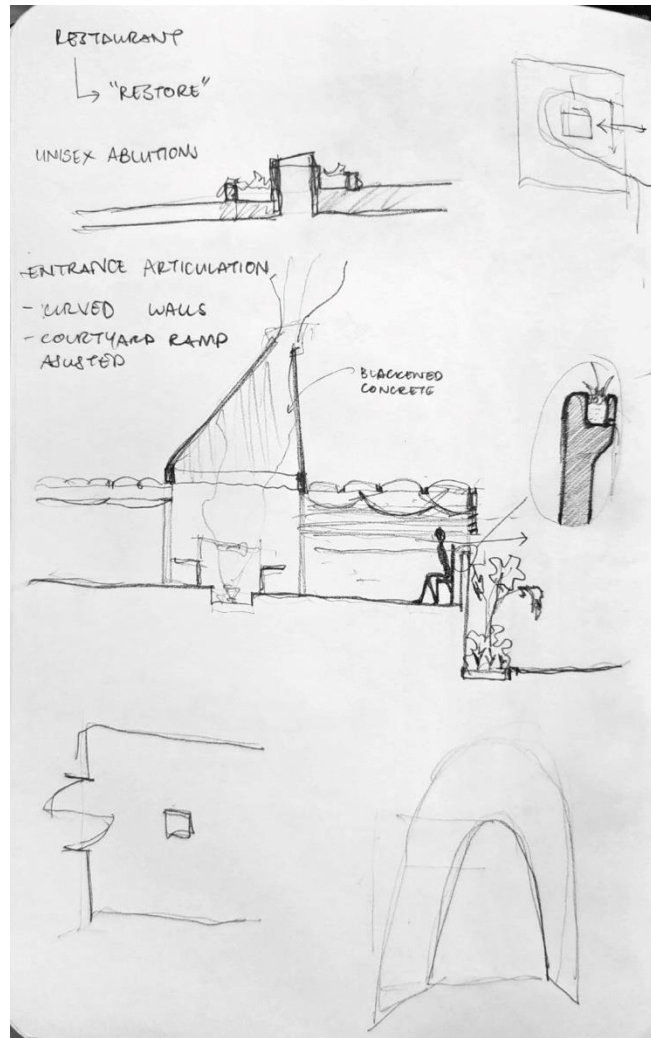


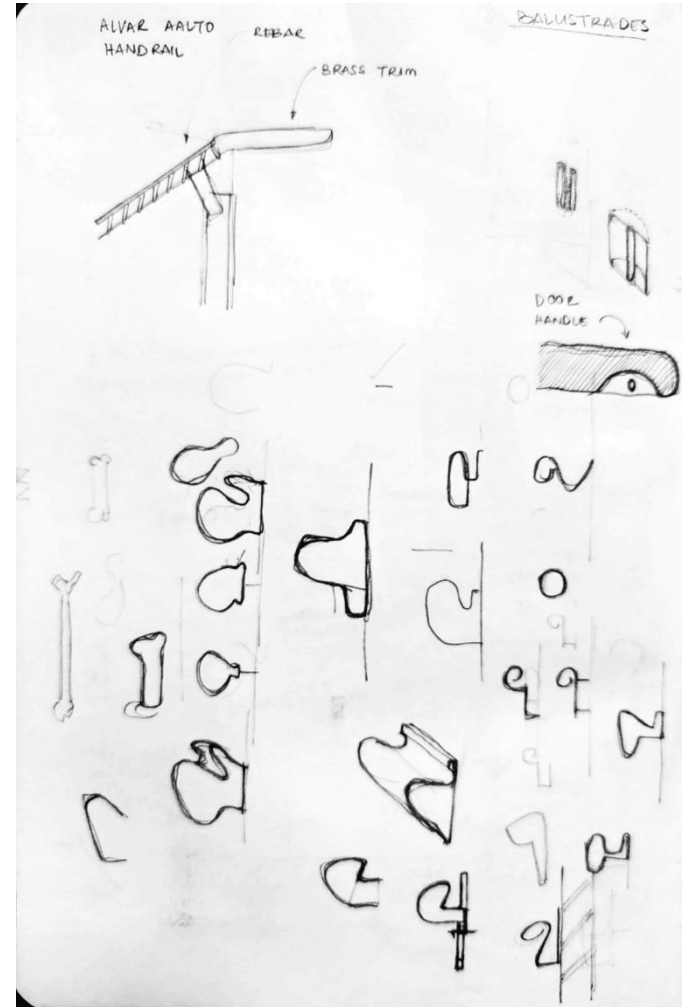
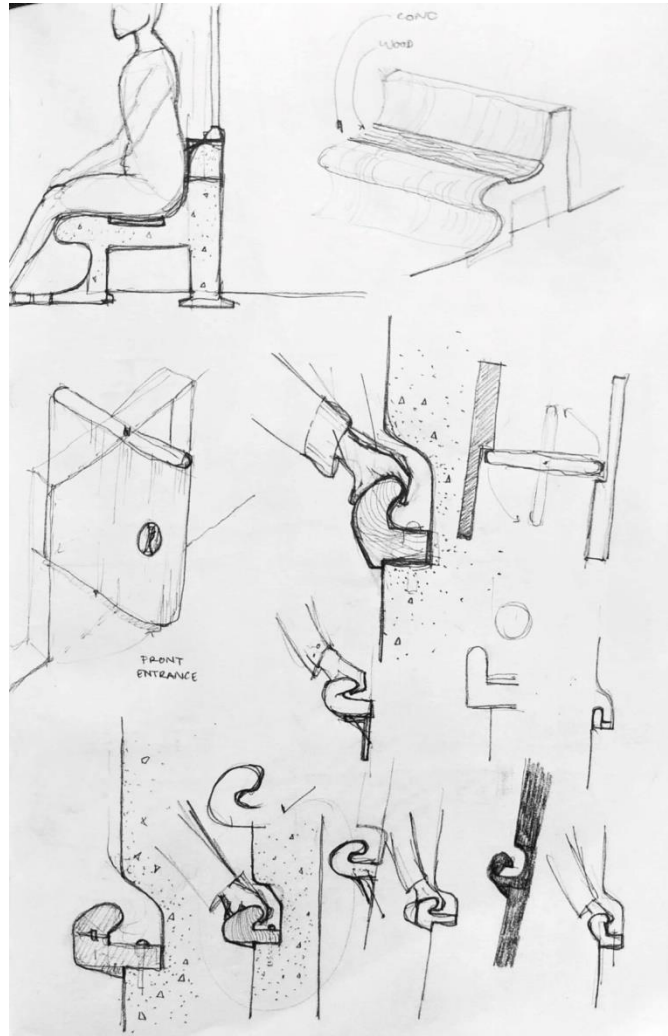
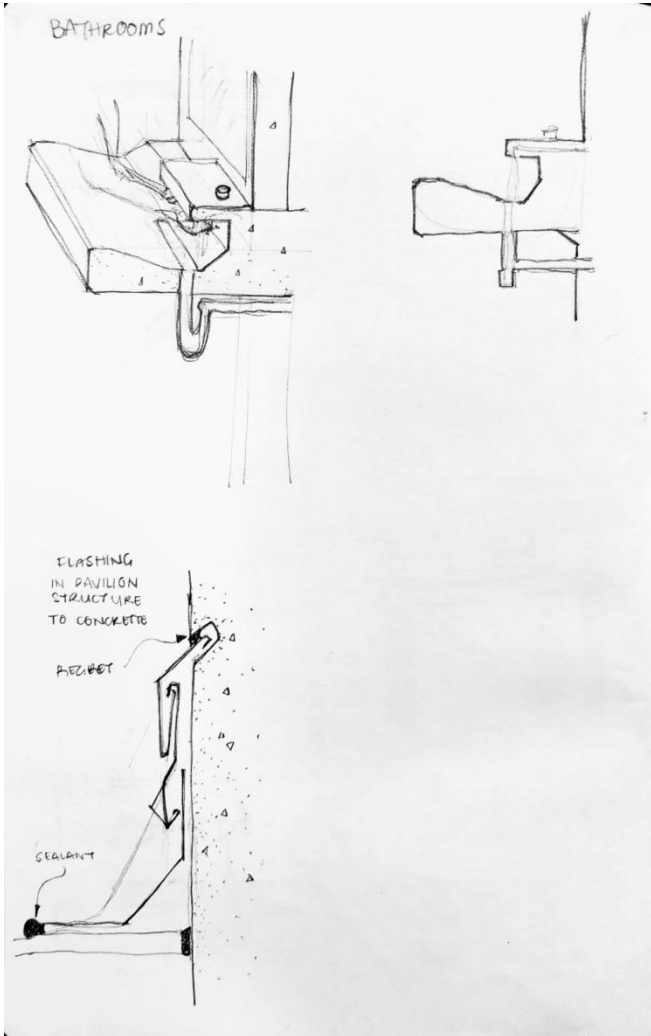


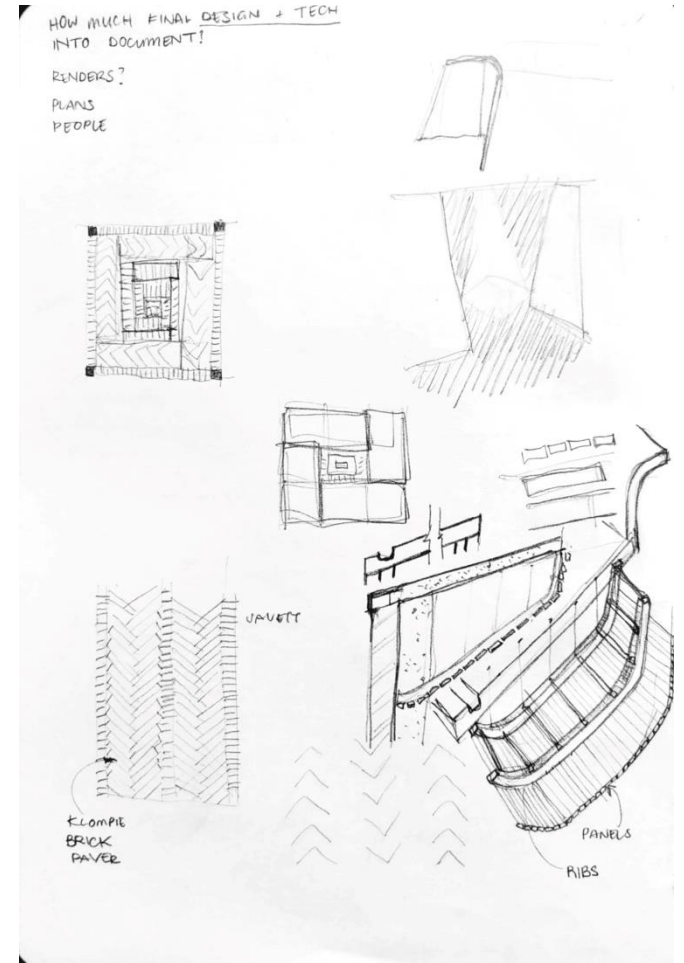
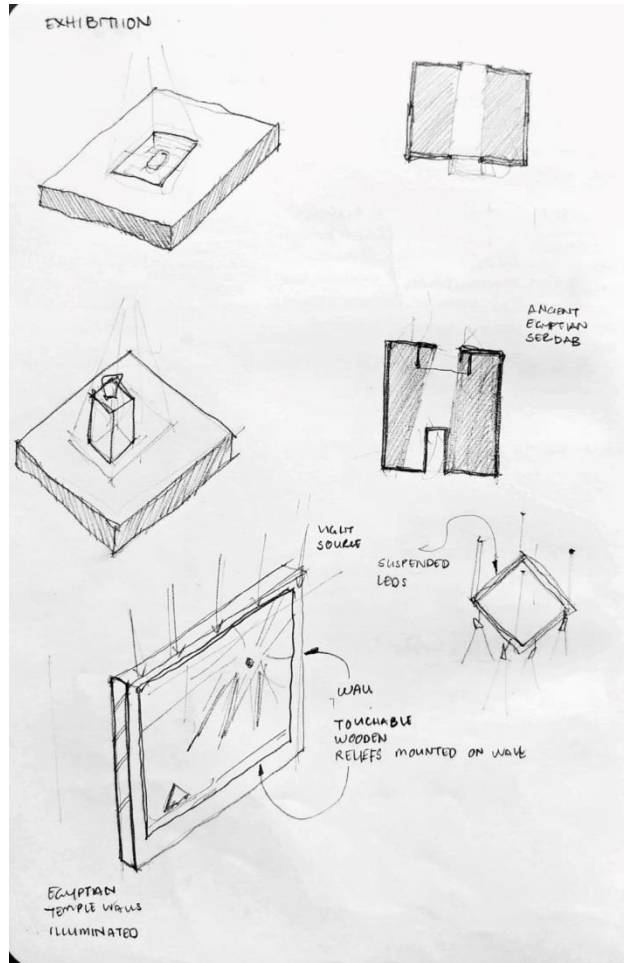
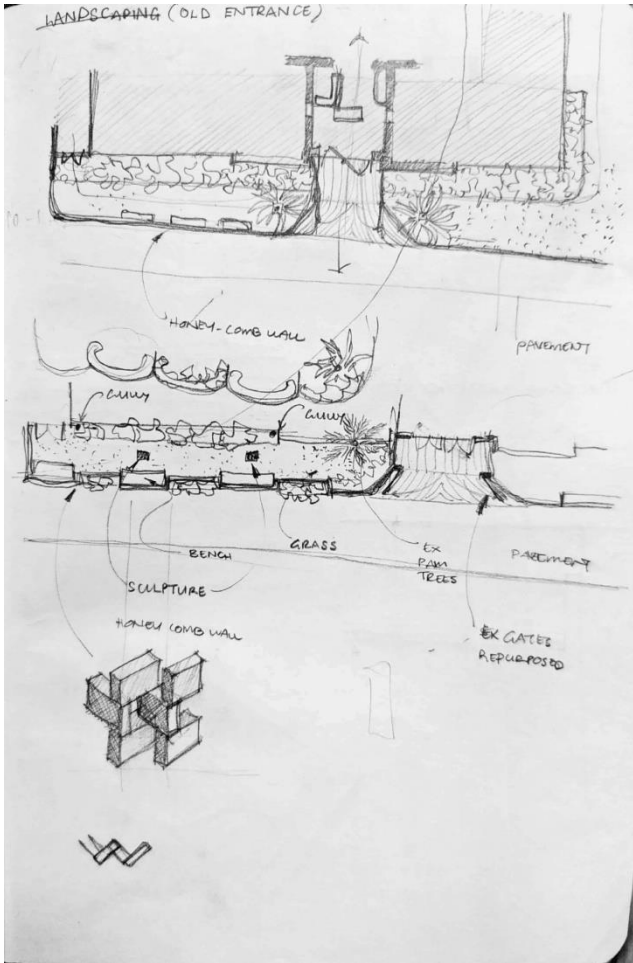






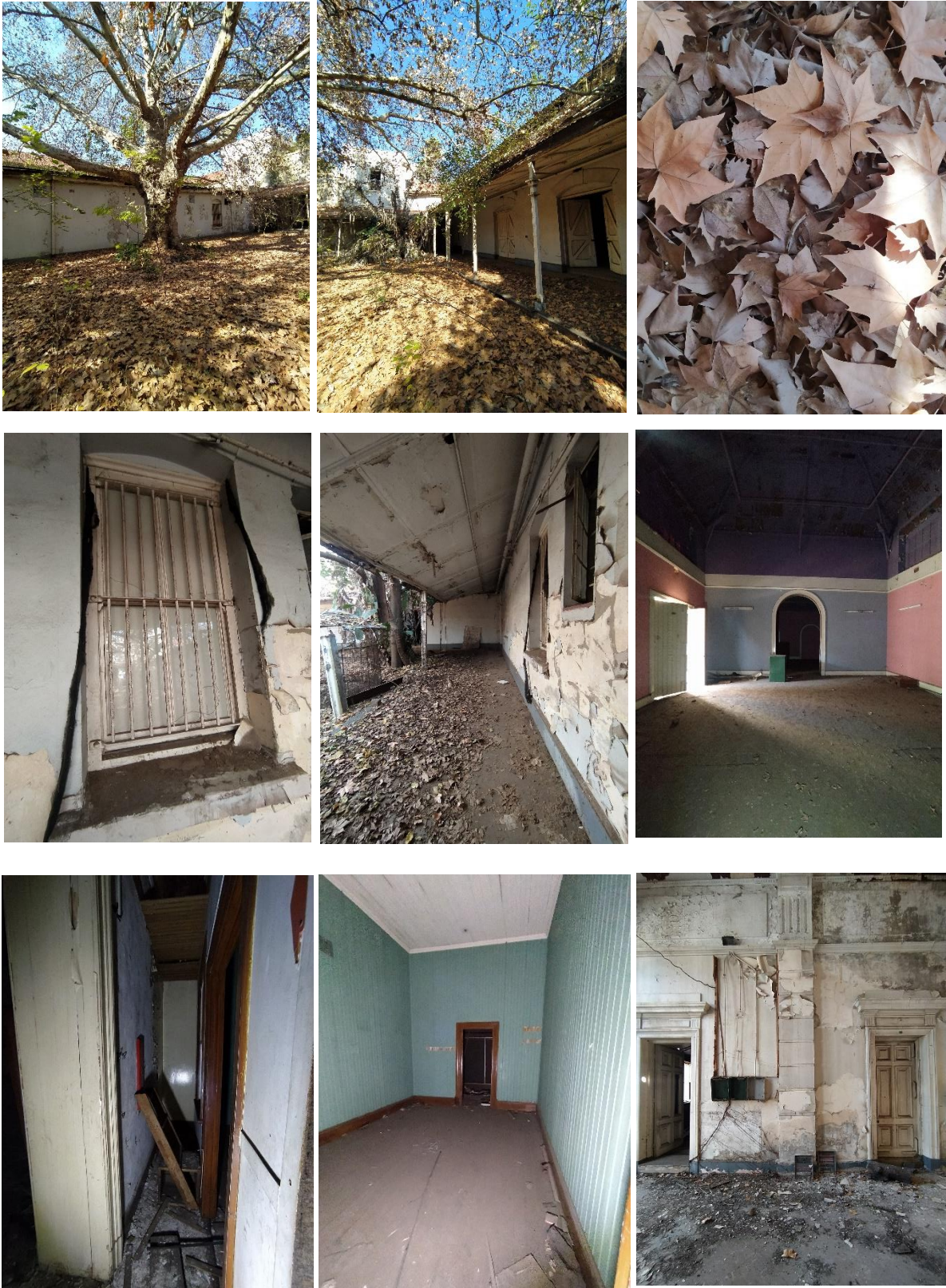






## APPENDIX B: SITE PICTURES

[Captured 2022.06.20 by author]







## APPENDIX C: WATER CALCULATIONS

### AREA CALCULATIONS

Catchment	Area, A (m <sup>2</sup> )	Runoff Coefficient,	
Roof	3049,553	0,85	0,63
Paving	1047,908	0,8	0,20
<b>TOTAL</b>	<b>4097,461</b>	<b>0,837212715</b>	

### RAINWATER YIELD CALCULATION

Month	Ave. rainfall, P (m)	Yield (m <sup>3</sup> ) (Yield = PxAxC)
January	0,136	466,54072
February	0,075	257,28348
March	0,082	281,29661
April	0,051	174,95277
May	0,013	44,595804
June	0,007	24,013125
July	0,003	10,291339
August	0,006	20,582679
September	0,022	75,469822
October	0,071	243,5617
November	0,098	336,18375
December	0,11	377,34911
<b>ANNUAL AVE.</b>	<b>0,674</b>	<b>2312,1209</b>

## IRRIGATION DEMAND

Month	Planting area (m <sup>2</sup> )	Irr. Depth / week (m)	Irr. Depth / month (m)	Irrigation demand (m <sup>3</sup> /month)
January	200	0,05	0,3	60
February	200	0,05	0,3	60
March	200	0,05	0,2	40
April	200	0,04	0,15	30
May	200	0,03	0,1	20
June	200	0,03	0,1	20
July	200	0,03	0,1	20
August	200	0,03	0,15	30
September	200	0,03	0,2	40
October	200	0,05	0,3	60
November	200	0,05	0,3	60
December	200	0,05	0,3	60
			<b>TOTAL</b>	<b>500</b>

## WATER DEMANDS

Month	Persons	Demand / per cp / day (l)	Demand (m <sup>3</sup> /month)
January	250	10	77,5
February	220	10	61,6
March	220	10	68,2
April	220	10	66
May	220	10	68,2
June	220	10	66
July	220	10	68,2
August	220	10	68,2
September	220	10	66
October	220	10	68,2
November	220	10	66
December	250	10	77,5
		<b>TOTAL</b>	<b>821,6</b>

## TOTAL DEMAND

Month	Total demand (m <sup>3</sup> /month)
January	137,5
February	121,6
March	108,2
April	96,0
May	88,2
June	86,0
July	88,2
August	98,2
September	106,0
October	128,2
November	126,0
December	137,5
<b>TOTAL</b>	<b>1321,6</b>

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**WATER BUDGET (ACCUMALATIVE)**


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Month	Yield (m <sup>3</sup> )	Demand (m <sup>3</sup> )	Monthly balance	Vol. water in tank (m <sup>3</sup> )
January	466,5	137,5	329,0	329,0
February	257,3	121,6	135,7	464,7
March	281,3	108,2	173,1	637,8
April	175,0	96,0	79,0	716,8
May	44,6	88,2	-43,6	673,2
June	24,0	86,0	-62,0	611,2
July	10,3	88,2	-77,9	533,3
August	20,6	98,2	-77,6	455,7
September	75,5	106,0	-30,5	425,1
October	243,6	128,2	115,4	540,5
November	336,2	126,0	210,2	750,7
December	377,3	137,5	239,8	990,5
<b>ANNUAL AVE.</b>	<b>2312,1209</b>	<b>1321,6</b>		

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